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NATURAL HISTORY SERIES—BOOK THIRD.

NEIGHBORS WITH
WINGS AND FINS.
AND
SOME OTHERS,
FOR YOUNG PEOPLE.



By JAMES JOHONNOT.

NEW YORK :: CINCINNATI :: CHICAGO:
AMERICAN BOOK COMPANY.

The Boy and the Owl.



“Tu-whit! Tu-whoo!”
Caught as the deed was almost done,
Detected when the prize seemed won?
In vain all efforts to conceal
The egg you’ve risked so much to steal
“Tu-whoo!” the owl croaks forth anew:
“Just put it back! Tu-whit! Tu-whoo!
Tu-whit! Tu-whoo!”

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By D. APPLETON AND COMPANY.

THE PLAN OF THE WORK.

IN this third book, the pupil is prepared, by both age and experience, to enter upon more systematic study. Story and description, the staple of the preceding numbers of the series, have performed their work of awakening interest, and the next step in advance demands the consideration of relations of a more vital character than those already presented.

The lively interest that children always take in birds ; the eagerness with which they watch the graceful motions of "gladness on wings" ; the rapt attention that they give to the music which descends from tree tops or floats down "a brook of laughter through the air," have all led to an extended and detailed account of our feathered friends and neighbors.

But, in the treatment, the canons of scientific arrangement have again been made to yield to the more important laws of mental growth. The lessons begin with the familiar rather than with the simple. The bridge over which the mind passes from the obvious and common to the strange and unknown, is made up of similarities. From the chicken that scratches in the farm-yard, the mind is led to a consideration of the scratchers of field and forest the world over ; from the warble of the little wren at the door,

the attention is directed to the carol and song which greet the sunrise in its daily march around the world.

Science, story, and song are mingled in proper proportions: science, the latest and best, to inform; story, vivid and authentic, to interest; and song, fresh and vigorous, to inspire.

By this combination of matter and method, knowledge broadens; the mental faculties expand; the vocabulary grows from day to day; and the reading exercises become efficient means for obtaining the knowledge which most effectually arouses mental activity.

The good, prospective and potential, in the method may be lost by misconception and mismanagement. The reading may be converted into a mechanical pronunciation of words, the thought never reaching the understanding; or the process of reading may be regarded as an end, the thought terminating with the book.

The full benefit of the system can be experienced only when each new fact and new relation stated will lead to investigation outside of the book, and when is established the threefold process which makes observation the basis of instruction; uses books for obtaining facts not accessible to direct perception; and culminates in well-ordered and well-expressed thought.

In the preparation of this book, I wish to express my obligation to Hon. John Monteith, of St. Louis, for valuable assistance in both research and composition. To him in a great measure is due the effective style in which the subjects are presented.



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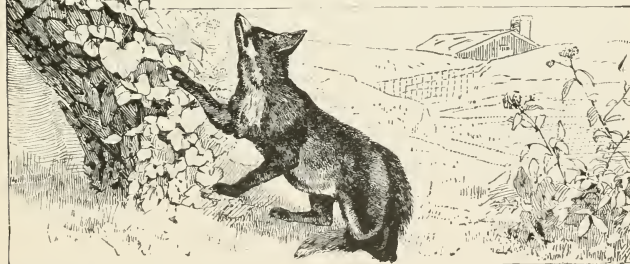
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A hungry fox discovered a crow perched upon a high branch, with a piece of cheese in her mouth which she had just stolen, and he thus addressed her :

“What a beautiful bird! How soft and glossy your plumage! How bright the glance of your eye! Doubtless your voice is as musical as your form and dress are elegant. Do favor me with a song which can not be less than divine!”

The crow, pleased by this flattery, opened her beak and gave a dismal croak, when down fell the cheese, and was snapped up by the fox in an instant.





The Peacock.

CHAPTER I.

SCRATCHING FOR A LIVING.

1. It is a bright, sunny morning. Our feathered friends are awake and out. They are talking, laughing, crying, peeping, crowing, clucking, gobbling, and shrieking. They are running, rolling, hopping, flying, strutting, and scratching. They seem to think the whole world belongs to them. They fill the air with their noise. Their many-colored feathers turn and glisten in the mellow sunshine, and the whole farm-yard is alive with their play and work.

2. With the first coming of daylight the hens have dropped from their perch to the floor, and are led forth by the gay paternal cock to enjoy a day's life. A busy crowd are they. When not scratching for food they are laying away a treasure as good as gold. They rest, and roll, but never loaf, or waste time. The hen seems to know that if she would eat she must work. And she sets about her work early, to obtain food for herself and for her children.

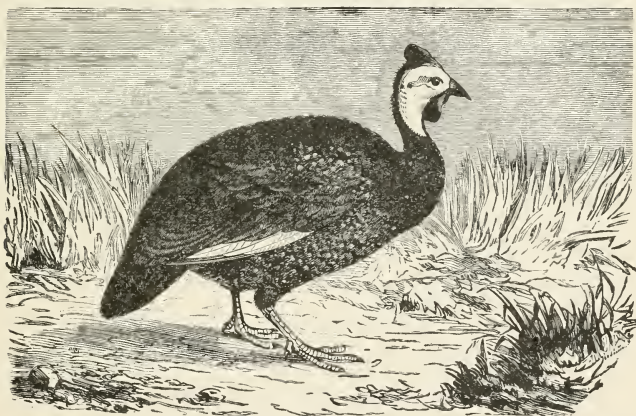
3. The hen knows where to seek her bread and meat. Grain and seeds pressed into the earth by the tread of heavy feet are her bread. Her meat has wings and legs. It crawls and digs and burrows in the ground. It is a diet of worms, flies, and beetles. They have a good time during the cool and dark of the night while their enemies are asleep. But when the fingers of the morning begin to touch them they think of the rude, scratching claws that will soon be after them, and they scamper and hide before their eager pursuers.

4. And what about hen's teeth? The hen, and all other scratchers, have teeth, but not in the mouth. Their food is swallowed without chewing, and is at once stored in the crop, where it remains until it is softened. Then it passes into the gizzard, where it is rubbed and ground between tough, hard ribs, like the grooves of a washboard. To help in this work, the gizzard is filled with sharp stones and bits of gravel which she has swallowed. These are the hen's teeth, and they work quietly, both while she is gathering food and when she is resting or roosting.

5. So the hen is the princess of scratchers. Her hard, tough claw, with its four toes and four sharp nails, scratches while the sun shines. Her nimble bill catches and bags the running and

crawling game which her gizzard, with its strong teeth, chews and grinds at her leisure. While her brood is young and tender she scratches for them, and teaches them how to scratch for themselves.

6. Above all the noises which the scratchers of the farm-yard make, we may hear the harsh and grating voice of the Guinea-fowl. Like some vain beings without feathers, he seems to think that he is greatest who makes the most noise. He is the rattling orator of the farm-yard; and, like many public speakers, he has not sense enough to know



The Guinea-Fowl.

when to stop. All the live-long day his clatter, like the sound of a cracked bell, or a squeaking saw, seldom ceases. At times he gets out of pa-

tience with his hearers, picking quarrels with turkey, and peacock, and hens, and throwing the whole farm-yard into confusion.

7. The Guinea-fowl is by no means a useless bird. Allured by its beauty and its dark, delicate flesh, the ancients brought it from the coast of Africa. Its very noise and quarrelsome disposition are made use of by poultrymen to protect the rest of the feathered circle against the attacks of hawks. And it is also valued for the richness of its eggs. Some have said that the Guinea-hen is sensitive about the disturbance of her nest; and that she will forsake eggs which human hands have touched.

8. The Guinea is a little smaller than the common hen, but it bears a general family likeness to the turkey. Its neck is long, ending in a queer-looking head, with a top-knot sticking up like the end of one's little finger. As to color, there are pure white Guineas and Guineas of slate-colored feathers, sprinkled over with round, white spots.

9. A long, shrill, unpleasant cry calls our attention to the comb of the barn-roof, where the peacock has passed the night, and is getting ready to come down and swell among the common folks of the yard. Isn't he beautiful? No wonder that he was carried from his home in India as a present to King Solomon. No wonder that Alexander the Great, charmed with his gorgeous feathers, gave

strict orders that no harm should be done to him. He knows his own beauty, and for this reason he is very vain. And if any creature has a right to be proud it is the peacock.

10. About the size of the turkey, the form of the peacock is lithe and graceful; and it carries a train longer than his body, covered with gauzy feathers of green, gold, bronze, and blue, all blended into the brightest and richest hues, as he raises and spreads and turns his tail to the sunlight. The eyes in the feathers of this overskirt are like those of the peacock-butterfly, which boys catch with their hats in summer-time. The peacock has been known to live as many as a hundred years.

11. How wide is the difference between the beauty of the peacock and that of his mate, the pea-hen! And why is this so? The beautiful plumage of birds, we must know, is intended both to attract the eye of man and to please the eyes of the birds themselves. Birds win the affections of their companions by their beauty or their song, just as boys and girls gain friends by good and pleasant actions. But the female bird, who must cover her eggs or her young, on the ground or on trees, exposed to many enemies, would only invite and increase danger if she were beautiful. So, like a good and sacrificing mother, she must be sober and plain, for the sake of her children.

CHAPTER II.

THE BIRD OF CHRISTMAS.

1. WE now come to the bird which is a universal favorite, especially when, as at Christmas-dinner, it lies on the platter, well roasted, brown, tender, and juicy, and hot from the oven. How cold and dreary would Christmas be without the presence of this silent, roasted friend !

2. Eager eyes of little folks dwell fondly upon the feast "fit to set before a king," and, when the carving is done, spoons must be thrust into little mouths, to keep them from crying out "Turkey !" before-time, as was the case of the children of Bob Cratchet, in the "Christmas Carol."

3. When no peacocks are about, the turkey is the most showy bird of the farm-yard. It is larger, and can boast of longer legs, than any of its companions ; and its coat is shiny and always clean. By turning in different ways to the light, the wild turkey appears at one time nearly black, and again it shows a bright green or a rich, deep bronze color. In the farm-yard turkeys may be seen of different hues—some white, others brown or bronze, while most of them, like Joseph, have coats of many colors.

4. The hen-turkey is plain in her dress, so that

she may, as little as possible, attract the attention of her enemies. She is shy in her manner, and is disposed to make but few acquaintances. She talks to her young with a soft, cooing note, when



The Wild Turkey.

she feels safe ; but, when danger comes, she bids them hide in the grass by her sharp "quit, quit !" The little ones, in turn, answer the voice of their mother by high-keyed, affectionate, and contented "peeps," that seem to say, "All is well."

5. The turkey-cock, or gobbler, as he is called, wears gayer clothes than his dames. His feathers shine with deeper, brighter colors ; and his tail is more gorgeous than theirs. He is a fine-looking fellow, and, like the peacock, he knows it, and is proud. He struts about with his red face and wattles, with his head drawn back, his tail spread like a fan, his wings dropped and dragging on the ground ; and he seems to say, "I am the finest bird in the world."

6. Getting food and eating are the main business of turkeys. Though they are scratchers, they spend little time in scratching. The farm-yard is too small for them. Great walkers and wanderers are they. Tender grass, leaves, bugs, flies, and worms tempt them ; and for these they roam over the fields, far away from home, leading their young ones along, and, with the declining sun, return to the farm-yard with full crops.

7. Turkeys are natives of America. They once roamed wild all over the country, and are still found wild in the forests of the South and West. They do not go from North to South with the

changes of the seasons ; but, when food and water fail in one part of the country, they are obliged to go to another. They are social, and live in small families ; but, when they leave for a more abundant region, they collect in great numbers.

8. After the broods are hatched, the turkey-cocks live by themselves, in parties of from ten to a hundred. They are cruel parents, and the hen-turkeys must keep their young by themselves, for fear that they may be killed. When, however, a want of food forces the turkey community to seek a new home, all set out together on foot.

9. If they come to a river, they collect in mass, meeting on the highest bluff, and there often remain a whole day consulting as to what they shall do. This is thought to be a good opportunity to show off, and to display fine clothes and loud talk. Besides, it is a political meeting, and a leader is to be chosen. So the gobblers strut and gobble more than usual, and even the hen-turkeys grow nervous and try to gobble.

10. At length, when all are ready, they rise to the tops of the tallest trees. The leader gives a signal-cluck, and all take flight for the opposite shore. Across even a very wide river the strong birds will make their flight. But many of the young fall into the water, and reach the shore by swimming.

11. Very careful and tender mothers are these hen-turkeys, and they show their care in the selection of nests. In a hollow place, among dry leaves, by the side of a log, or in a fallen, leafy tree-top, but always in a dry place, they lay their eggs. Slyly and secretly they deposit and cover them so as to preserve them from the hungry crow, which is ever watching for the chance of a feast. When she returns to her nest, the hen-turkey follows a different path from that by which she left it. If her eggs have been touched by a snake, she abandons the nest forever.

12. When first hatched, the young turkeys wear a coat of soft, heavy down, and are very tender. The mother, anxious to keep them dry until their feathers are grown, leads them to dry and sheltered places. When the dew is on, or rain is falling, she covers them with her wings. In fourteen days they are able to fly to the low branches of trees, where they pass the night under their mother's wings. In another month they have grown strong enough to reach the tops of the highest trees.

13. But bird-life, like other lives, is not without its dangers. Man, the fox, and the owl, are the enemies of young turkeys. The owl makes its attacks while they are roosting in the trees. Slyly and silently he draws near to the innocent sleepers, but is usually discovered.

14. A single cluck from one of the flock gives the alarm, when they all rise upon their legs and watch the motions of the owl. He selects his prey, and darts down toward it like an arrow. But, at this instant, the victim lowers its head and raises its tail over its back. The owl strikes the tail instead of the body, and the turkey drops to the ground with only the loss of a few feathers.

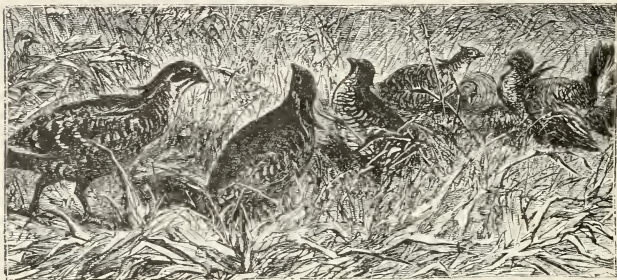
15. Those who have studied the habits of the wild turkeys know how to easily trap them. On a slope of ground, or hill-side, a pen of small timber is constructed, just as children build cob or stick houses. It is covered with a strong roof, and on the lower side of the slope, close to the ground, an opening is left large enough for a turkey to pass through. From this opening, and down the hill, a short trench is dug, and corn is scattered both in the pen and in the trench.

16. The turkeys are delighted to find such rare food, and doubtless pass a vote of thanks to the kind hand that has provided for them without either hunting or scratching for it. The greedy creatures follow the golden line of corn until they reach the pen, when they stoop and enter. Now, finding themselves confined, they try to break out through the sides and roof, but never think that they can go out as they came in.

CHAPTER III.

SCRATCHERS OF WOOD AND PRAIRIE.

1. FROM the story of the turkey we learn that the circle of our feathered friends extends far beyond the farm-yard or meadow. Away in wild and woody places, and over broad prairie-lands, are the partridges, pheasants, and prairie-chickens.



The Prairie-Hen.

Here they live upon the worms and bugs which they scratch from the ground. Their right name, so we learn from those who know, is grouse.

2. The first of these we find in the wooded country, and it is the ruffed or ruffled grouse. In the Eastern and Middle States it is called the partridge, and in the South the pheasant. Their flesh is white, and excellent for the table. Scarcely half the size of the common hen, the ruffed grouse is so

called on account of a tuft of broad, soft, glossy black feathers which it wears on either side of its neck. Its color is grayish brown, touched with pale black spots; and it wears a soft crest on its head, and behind it sweeps a broad fan-tail.

3. To call or charm its mate, to get up a fight with its rivals, or to express its good feelings, this bird has no sweet notes, like the song-birds, but it makes a noise like the beating of a drum. Standing on a log, he throws his head back like the gobbler, spreads his tail, and flaps or vibrates his wings so rapidly that the strokes can not be distinguished. This drumming is sometimes heard at the distance of half a mile.

4. The ruffed grouse is very affectionate and tender toward her young. She makes her nest in a tuft of grass, or under a bush. Here she deposits from twelve to twenty white eggs, each about a quarter of the size of a hen's egg. While she is sitting, the male stays about her to keep her company, and to defend her against enemies. The hen is so careful of her nest that she has sometimes allowed herself to be stroked by a man's hand rather than forsake her precious charge.

5. And when the little ones are hatched, the mother-grouse is wonderfully watchful and cunning in her way of protecting them. When suddenly disturbed by a human being, she gives a

scream, which scatters her chicks, who hide in the grass, and keep so still that it is nearly impossible to find them. Then she runs in the opposite direction, leading the disturber to think her young are there; and to excite sympathy she flutters, and cries, and pretends to be lame.

6. A near relation of the ruffed grouse is the pinnated grouse, or the famous prairie-chicken. Many years ago it was found in nearly every part of the country, but at the present time its home is confined to the prairies of the Western States. About half the size of the common hen, it wears a small crest on its head, a tuft of long feathers on each side of its neck, runs on a pair of feathered legs, and feeds upon berries, insects, and grain. Its flesh is dark and much prized for food.

7. Spring-time is a season of great excitement in the community of prairie-hens. Early every morning the cocks fly to a battle-ground, or "scratching-ground," as it is called, where about twenty of them assemble. Then they inflate the yellow sacs that stand out on either side of the neck, and drum with their wings more loudly even than do the ruffed grouse.

8. The hens quietly gather about the edges of the ring when the fight commences. With tails erect and heads thrown back, and wings dragging on the ground, the cocks strut about like turkey-

gobblers. Then they close in mortal combat. They rise in the air and strike each other, until the victor drives his antagonist from the field.

9. In her nest on the ground the prairie-hen lays ten or twelve brown eggs. After eighteen or nineteen days of sitting, she brings out her brood. The young are protected by her alone. Whenever they are surprised by an enemy, she utters a cry of alarm, when they



Cock of the Plains.

scatter and scamper, and hide among the grass and brush. Then the mother, like the ruffed grouse, flutters and limps and rolls, that she may deceive and arouse sympathy.

10. The largest of American grouse is the sagehen, or the "Cock of the Plains." The broad plains of the far West, reaching to the Rocky Mountains and the Columbia River, are its native home. It is nearly two and a half feet in length, about the size of a hen-turkey, and is covered with handsome gray and black plumage. A curious

fact about this bird is that it has no gizzard. The sage-cock, like the pinnated grouse, has enormous sacs on the sides of its neck. These sacs are filled

with air when he raises his tail, lowers his wings, and struts like a turkey.



American Quail.

11. We come home to our own little quail, or American partridge. Its reddish-brown feathers, lined with black and yellow, the white throat, and black stripes on the head of the male, and the buff throat and modest brown head of the female, we all know.

The size of the bird, too, we know—so many times, in the early part of the season, have we seen the male perched on the fence, and heard his clear, sharp, musical whistle, “Bob White!” ring out upon the summer air, to attract the attention of his pretty mate.

12. If you listen carefully, you will detect in his whistle one soft note, and two strong or loud ones. Hence, Audubon has said his call consists of three syllables, and that he sings, “Ah! Bob! White!” The hen deposits in her nest, under a low bush, as many as twenty pure-white eggs

The cock relieves her in the task of hatching; and this is a reason why his plumage is not so gaudy as that of some male birds—that he may not attract attention to the place of the nest.

13. The young scud away almost as soon as they are out of the shell. Both parents protect and brood them. When they are frightened, they will hide under the feet of the intruder, and it is almost impossible to find them. They feed upon berries, grain, and insects; roaming over the fields of the farm and catching the insect enemies of the farmer's crops.

14. When a covey goes to sleep at night, the birds form a large circle, with their tails toward the center—each standing some distance from the others. Then they move back toward the center, until they are close to each other. Now they are prepared to watch danger on all sides.



CHAPTER IV.

SCRATCHERS OF OTHER LANDS.

“See ! from the brake the whirring pheasant springs,
And mounts exulting on triumphant wings.”

1. NEXT to the peacock the golden pheasant ranks as the most beautiful domestic bird. Its

original home is in Asia, from which country come so many sunny, golden things. The ancient Grecian poets tell a story of a hero called Jason, who was promised a kingdom and a crown if he would bring a golden fleece from a place away on the coast of the Black Sea. So he sailed in his ship Argo with fifty comrades and captured the prize. Near where he found the golden fleece, at a river called Phasis, some of his companions found the golden pheasant, and they brought it back to Greece. From this beginning, it is supposed, the pheasant has spread over a large part of Europe.

2. With a small body, about the size of a half-grown chicken, the principal part of the golden pheasant appears to be its splendid clothes. Like an Eastern king, it is arrayed in purple and gold. Upon its head is a bright golden crest, in which each feather is tinged with velvety black. The plumage on its breast, shoulders, and sides is purple or dark blue, with streaks of gold. The long feathers are red, with eyes of golden yellow. Its tail is nearly two feet in length, and its movement is soft and graceful.

3. The daily life of this bird is much like that of the grouse. It loves the tangled wood, where it picks and scratches for insects. The mother-bird is careless about her nest and her young. Sometimes she crushes and eats her own eggs, and

another hen must be borrowed to hatch and brood the chicks. The hen-pheasant, though clothed in a more sober dress than that of her mate, when she



The Argus Pheasant.

has grown too old to lay eggs, changes her plumage and becomes gorgeous like him.

4. Even more showy than the golden pheasant is the Argus pheasant. Its colors are not so brilliant, but they are more delicately marked. The

head is deep black, and the feathers of the rest of the body are variegated with different shades of yellow, brown, red, and gray. The wings are large and broad, like fans, and are adorned with covers of mixed brown, red, and yellow, and are dotted over with large, shining round spots or eyes. Among the fabled characters of the ancient Greeks Argus was famous for his hundred eyes. The Argus pheasant is so called because of the multitude of eyes on its wings.

5. In ancient times, when Croesus, the richest king, was seated on his throne in royal robes, and in great pomp, he asked Solon, the wise man of Greece, if he had ever seen anything so fine. Solon replied that, having seen the beautiful plumage of the pheasant, he could not be surprised by any other splendor that might be presented to him.

6. Among the scratchers of other lands the mound-bird is the most remarkable. A small bird, about the size of a female pheasant, it is modest and shy in its dress of sober brown and red. The story of its work would read like a fable were we not obliged to believe the reports of truthful men. Weighing scarcely more than two pounds, the mound-bird builds by the sea-side in Australia its home, a hill ten feet high and sixty feet in circumference at the base.

7. How the mound-bird raises so large a hill is

not certainly known. Its feet, which are immense for so small a bird, are evidently intended for heavier work than scratching; and it has been seen hopping along on one foot, while in the other claw



Brush-Turkeys and their Egg-Mounds.

it carried a large bunch of grass. It seems as if a single pair or generation of these birds could not possibly perform so great a task.

8. Strange as it may seem, this mound is the bird's nest. In the top a hole is made which is packed with grass and leaves, mixed with earth. Here are laid eight large white eggs, which are set

on end and left to be warmed by the heat that comes from the decay of the litter of which the nest is made. Only the male bird is sent occa-



The Lyre-Bird.

sionally to open the nest and stir the litter, so as to let in the air and regulate the heat. Wonderful bird !

9. At the proper period the young birds are

hatched. Not with soft down and tender skin, like other youngsters of the bird kind, but full-feathered and strong. And out of this temple of their nativity they find their way to the light ; and, having dried themselves in the sun, they enter upon life's duties and sports without help.

10. You can see how the lyre-bird of Australia gets its name. The music of the bird is not in its throat, but in the form of its tail, which is that of a musical instrument called the lyre. Though beautiful, the lyre-bird is not proud, but shy and retiring, and exceedingly swift of foot. It is difficult to capture or even to get sight of it. Sometimes it is decoyed by the hunter, who, among the bushes, wears one of the beautiful tails on his hat.



CHAPTER V.

A SENSITIVE SPIRIT.

1. MRS. BLACK SPANISH laid four beautiful white eggs, from which, after much tedious and anxious sitting, were hatched four downy little chicks, that followed their mother about the yard, crying "Peep, peep," in a way delightful to hear.

2. Mrs. Black Spanish was very proud of her great-great-grandmother, and very proud of her

children, and very proud of herself, and of everything belonging to her. And when she strutted through the hen-yard with her little brood, calling "Kut, kut, kut, kut, ka-da, kut!" which is black Spanish for "Did you ever see such chick-ens?" she was quite a sight to see, and excited great admiration and respect in all fowls. Even the white bantams courtesied, and nothing could exceed the politeness of the old speckled hens.

3. The only rooster among the new-comers seemed to have a feeble constitution. His feathers were few and scattering, his blue legs were so small and weak they almost doubled up when he attempted to walk, and he was very cross and snappish.

4. Dr. Gander put on his eyeglasses and took a good look at him, when Mrs. Black Spanish brought her family near the goose-pen.

5. "Good-day, madam," called the doctor through the fence. "I'm glad to see you out again. I hope you and your interesting family are well."

6. "Quite well," said Mrs. Black Spanish, with a lofty bow.

7. "And that small young one," said the doctor, nodding his bill toward the knock-kneed little rooster, "how is he? He appears to be a trifle weak about the legs. Some nobum-bobum ointment, now, well rubbed in at night—might—"

8. "My son is quite well," snapped Mrs. Black Spanish, ruffling her feathers. "He has a delicate frame and a sensitive spirit. Our family all have sensitive spirits."

9. "Just what I was going to say, ma'am, when you anticipated me," said Dr. Gander, politely.

10. Mrs. Black Spanish walked away to call upon her own physician, Dr. Peacock, who was not only very learned, but was also a great beau and a favorite with the ladies.

11. "I've come to show you my family, Dr. Peacock," said she, graciously. "Jacob, my son, you see, is like my family, delicate, and of a sensitive spirit."

12. "Ah, yes, ah," said the doctor, in a high falsetto voice; and as Jacob knocked down two of his little sisters, and snatched up the worms they had just scratched out of the earth, he continued: "Ah, yes, ah—I see, of a very sensitive spirit. He'll be a credit to you, my lovely Mrs. Black Spanish, take my word for it."

13. The older Master Jacob grew, the more greedy and hateful he became; but, partly because he pecked on the head every one that opposed his wishes, and partly because his proud mamma talked so much about it, his sensitive spirit became the reason and excuse for every disagreeable thing he did.

14. He was always bragging about himself, and nearly every evening he entertained the hen-house with tales of what he could do—if certain things should happen.

15. One day in spring, when the air was so warm that the violets and squirrel-corn were in blossom in the woods, there were six young families in the hen-yard; forty tiny fellow-chicks strolling about on eighty little yellow legs.

16. There was a great clatter and chatter, and the warm, moist earth was scratched up in all directions. Everybody but Jacob was so busy with bill and claws that nobody else saw a black speck sailing, with long, slim wing, round and round, far above them, in the blue sky.

17. Jacob slowly wandered into the barn. Next he hopped upon a manger, and thence into the hay-loft. "I need to meditate in a quiet spot," he said to himself. "Undoubtedly that hawk will swoop down soon, and a rooster of my brave, sensitive spirit needs to be prepared."

18. In a moment more there was a great clamor in the hen-yard. The hens squalled, the roosters shrieked, and the farmer's boy bawled at the top of his lungs.

19. "It's very lucky I came up here when I did," thought Jacob. "My nerves could not have endured that noise. Ugh! what a racket!" As

soon as he thought it safe, he flew down from his perch and called out :

“ I’ve scared the hawk away !
Just see what I can do !
Oh, cock-a-doodle-do ! ”

20. All the hens and most of the little chickens crept out from their hiding-places at the sound of his voice, and ran up to him, clucking and peeping for joy, when the farmer’s boy, who had been ordered to kill a chicken for dinner, reached his pitchfork over the fence, and hit Jacob such a crack on the head that he never breathed again. “ Take that, old strutter ! ” said the farmer’s boy ; “ you’ll do for a pot-pie, and you are useless for anything else.” But at dinner he discovered that Jacob, though fat and plump, was not even fit for a pot-pie. “ The hawk could not have killed him, mother,” said the boy, as he struggled with one of the legs. “ I think he must have been hatched from an India-rubber ball.”

21. The hens lamented all that day over Jacob’s death. “ He was our deliverer ; he saved us from the hawk,” they cried. “ We shall never see another like him, who was so brave and tender, and of so gallant and sensitive a spirit.”

22. Old High-Biddy Martin, who was one of the speckled hens, and had a red rag tied to her tail for trying to crow, laughed, for, though she

had flown at the hawk and scared him from her chicks, she was cool enough to see and remember Jacob's retreat to the barn, and his return to the yard when the danger was past. But no one minded what she did or said, for she was not related to any of the first families, and so was of no possible account.

CHAPTER VI.

LONG LEGS FOR WADING.

1. IN the fall a great many people pack their trunks and follow the birds in their flight southward. They find a resting-place in Florida, where the air is so mild that they can live in tents all the year round.

2. While their Northern friends are wading through snow, or shivering round the fire, they are breathing the perfumed air of the pine-woods, or rambling through orange-groves, where the trees are ablaze with golden fruit.

3. If we were among those who could go

“Where no winter our footsteps can wrong,
Where flowers are blossoming all the year long,
Where the shade of the palm-tree is over our home,
And the orange and lemon are white in the bloom,”

before returning we would like to see some of the curious things which Florida keeps in store for us.

4. Some fine morning our party sets off for the shore, perhaps two or three days away. Our railway is a winding path through the pine and palmetto woods, our car is a rickety old wagon which Ponce de Leon might have used, and our engine is a pair of mules.

5. We jolt along over roads rough with palmetto-roots, but shaded by the umbrella-tops of the trees. Our hunters find plenty of game, and, while camping at noon or night beside some spring, we have a royal feast of quail or wild-turkey. If we tire of this diet, we can have venison or bear-meat for the asking.

6. Our journey ends on the banks of a body of water, made up of about equal parts of bay, swamp, and river. A sluggish stream oozes through the marshes, and enters the bay a few miles west. A long line of little islands or reefs separates the bay from the Gulf of Mexico, just beyond.

7. Here we pitch our tent at nightfall. Wearied with our journey, we prepare for rest. But the twilight is full of strange music. All around us is heard the "chuck-will's-widow" in the place of the "whip-poor-will" of our Northern homes.

From the water near by comes up the cry of the loon, and from the reefs that lie farther off come the screams of multitudes of sea-birds blended by the distance, so that the sound is like the rush of a far-off train of cars.

8. Lulled by the evening concert, we drop to sleep, and the music passes into our dreams. At



The Spoonbill.

daybreak we are called back to life by a delightful morning carol. The melody of the Carolina wren floats down from the tree-tops in sweet little warbles and snatches of song; and the mocking-bird fills the air with his cat-like cries and imitations of all the other birds of the forest.

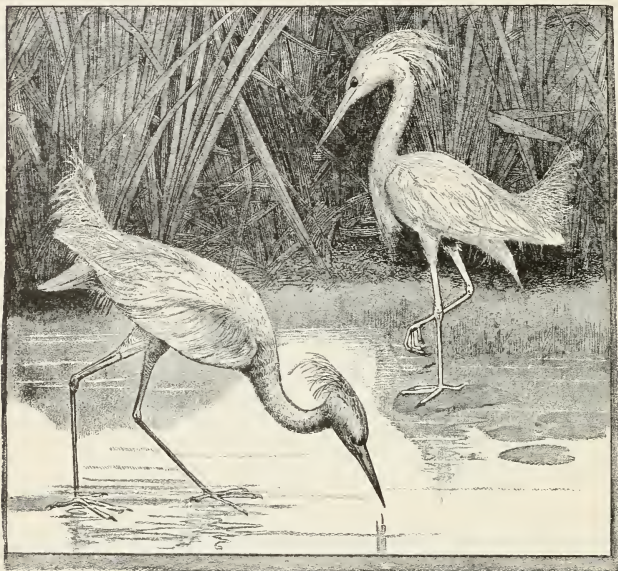
9. With the day our new school opens, and study begins—the study of that grand old book of Nature. But we must move with care. Many birds, who do not decline to show themselves “dressed in their Sunday’s best,” are shy about exposing the secrets of their homes and house-keeping to strangers.

10. Into a thicket near by and lonely we creep, and sit perfectly still. By-and-by, through the leaves, black specks appear in the sky. Down they come, nearer and nearer, till the shadow of wide-spreading wings is clearly reflected in the water. Then slowly, with fluttering and flapping, great white herons descend in flocks upon the shore.

11. At a little distance their long legs can not be seen, and their white bodies seem to float in the air a few feet above the earth. Soon they move in companies into the shallow water, where they stand half-leg deep. Their long necks are drawn back into their bodies, so as to balance the sharp and heavy bills. So still do they stand that we begin to think they have gone to sleep, when, quick as a flash, a neck is darted down and the bill grasps some unlucky frog, or fish, or young alligator which comes in the way.

12. Should the prey be small enough, it is swallowed at once; but, should it be large and inclined

to fight for its life, the huge bill closes upon it like a vise, and the bird flies to some neighboring tree, where it can have its fight and dinner undisturbed.



The Gray Heron.

Eels and young alligators it beats to death by repeated blows of its bill.

13. If other food fails, the heron stamps upon the soft mud, and eats such worms and bugs as are pounded out from beneath. When its appetite is satisfied, it goes to some quiet spot on the

land, and stands upon one leg and sleeps for many hours.

14. In some seasons of the year, from our hiding-place we can see flocks of flamingoes, with their scarlet coats, floating in the air, like rosy clouds. Or they are fishing in the water, their tinted bodies in fine contrast with the pure white of the heron. These birds are also waders, but their legs are longer and smaller, and their bodies are more graceful, than those of the herons.

15. We may observe the heron and other waders, however, without taking a journey to Florida. The great blue heron is found in the regions of the lakes and swamps all over the United States. Its habits are very much like those of the white heron.

16. In the breeding-season the herons collect in great numbers in some lone swamp, where the ground is covered with old logs and brush, and tall, half-decayed cedar-trees rise out of the mud and water. In the tops of these trees they build rude nests from a few sticks, and here the young birds are hatched and reared.

17. The sacred ibis is a wading-bird, about the size of a common barn-yard fowl. Its bill is curved downward in a curious way. Its home is in Northern Africa. The Egyptians worshiped the ibis as a sacred bird, it is said, because it cleared the

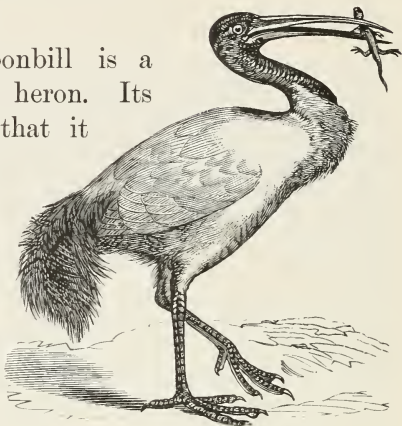
country of venomous serpents. An ibis similar to the sacred ibis is found in our Southern States.

18. The spoonbill is a near kin to the heron. Its bill is so wide that it

can scoop up its prey. Like the heron, it fishes; and, like the duck, it searches for worms in the mud. The first

year its color is a dark chestnut, the second year

it changes to a roseate hue, and the third year to a bright scarlet.



The Sacred Ibis.

CHAPTER VII.

BEACH-WALKERS.

1. A SMALL boy, perched upon a pair of stilts that add two feet to the length of his legs, presents an odd and ridiculous figure. But here is the stilt-bird, no bigger than a pigeon, mounted on a pair of bright-red legs two feet high. And these

pipe-stem legs are not thus out of proportion to the small body simply to make us laugh; they are for use and business.



The Stilt.

2. The stilt-bird gets his living by his long legs and his long, straight, sharp bill. In the mud at the bottom of sea-marshes and ponds, and even in the fresh water of the interior, lies his food, in the shape of worms, insect-eggs, and small shell-fish. He also catches the flies and

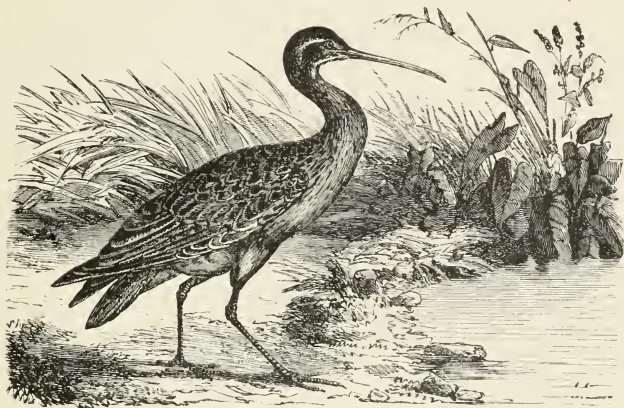
beetles that dance and play on the surface of the water

3. At the top of these long legs, which are without the hind-toe, there is a very pretty bird—slender, with long, pointed wings, greenish-black back, and white breast. One who has watched the stilt-birds in their wild home describes them thus:

4. "The birds had observed me, of course, as the grass was only a few inches high and the ground perfectly flat, but they stood motionless, looking with more curiosity than fear. It was a picturesque group; still as statues the birds stood in the water, raised only a little above it on their firm though so slender supports, their trim bodies drawn up to full height, and their large, soft eyes dilated in wonder. In an instant, however, as if they had but one mind in common, a thought occurred, and, quick as the thought, they were off."

5. Upon a much shorter pair of stilts come the common snipes, brown and white, and about the size of a newly hatched chick, tripping over our low meadows in the early spring. A bill, two and a half inches long, with sensitive nerves running down to its tip, enables them to feel their food as they bore into the soft ground. These birds are hunted for the excellence of their flesh.

6. The ruff is another stilt-walker. It is found in the temperate portions of Europe and America. About the size of a large snipe, the female wears



The Curlew.

a sober brown dress, while the male carries a large ruff of thick, long feathers about his neck, and changes his robes once each year, putting on a great variety of fine colors.

7. The lapwing, another long-legged lover of wet-ground food, is not found in America, but makes for itself a happy home in Europe. In size and habits it is much like the snipe, but has a shorter bill, and a tall crest of feathers upon its head. Its voice is loud and piercing. And this is the way the poet sings of it:

“Thou dove, whose soft echoes resound from the hill,
Thou green-crested lapwing with noise loud and shrill,
Ye wild whistling warblers, your music forbear,
I charge you, disturb not my slumbering fair.”

8. With a clear, mellow, piping voice the sandpiper divides the coasts and the wet grounds with his cousin the snipe. In large families the sandpipers come and go with the changing seasons. Their movements are graceful, whether they swim in the water, or trip lightly on their toes over the moist ground, or make a voyage in the air on their wings. There are more than twenty varieties of them, from the ash-colored sandpiper, which is ten inches long, to the little “tip-up,” brown and happy, that measures but five inches.

THE SANDPIPER.

9. Across the narrow beach we flit,
One little sandpiper and I,
And fast I gather, bit by bit,
The scattered drift-wood, bleached and dry
The wild waves reach their hands for it,
The wild wind raves, the tide runs high,
As up and down the beach we flit—
One little sandpiper and I.

10. Above our heads the sullen clouds
Scud, black and swift, across the sky;

Like silent ghosts in misty shrouds
Stand out the white lighthouses high.
Almost as far as eye can reach
I see the close-reefed vessels fly,
As fast we flit along the beach—
One little sandpiper and I.

11. I watch him as he skims along,
Uttering his sweet and mournful cry ;
He starts not at my fitful song,
Or flash of fluttering drapery.
He has no thought of any wrong ;
He scans me with a fearless eye :
Stanch friends are we, well tried and strong—
The little sandpiper and I.

12. Comrade, where wilt thou be to-night,
When the loosed storm breaks furiously ?
My drift-wood fire will burn so bright !
To what warm shelter canst thou fly ?
I do not fear for thee, though wroth
The tempest rushes through the sky,
For are we not God's children both—
Thou, little sandpiper, and I ?

Celia Thaxter

CHAPTER VIII.

FEATHERED MARSH-DWELLERS.

1. HIGH, very high up in the air we have sometimes seen passing over us a large flock of white or brown birds, with long necks stretching out before them, and longer legs dragging behind. At so great a distance they appear small, but their loud trumpet-voices tell us they must be quite large. They may be herons, but from the noise we conclude they are cranes.

2. There are fifty or perhaps a hundred of them, and they move in the form of a wedge or a triangle. In this way they fly that they may more easily cleave the air. The foremost bird in the procession has the hardest work to do ; so, as they move forward at great speed, each member of the flock takes its turn at being leader.

3. In general form like herons, the cranes are usually the larger of the two. Their feathers are more compact, and their necks are not quite so smooth and graceful. Some of the white or whooping cranes are of immense size, and stand as high as a man's breast. At the far West one has sometimes been mistaken for an antelope or a buffalo. And such coarse, piping voices ! no wonder that they can be heard for miles, for the whooping-crane

plays upon a windpipe nearly five feet long, about half of it coiled up in his breast like a French horn.

4. Strange birds and very shy are these cranes. They love the vast marshes and the tall cane-brake; the long sand-bars of the great river, where they can not be surprised; or the deep gorges of the mountains, where human feet rarely tread. When feeding or resting, they place one of their number as sentinel to watch for approaching danger.

5. And when danger comes, the sentinel gives a whoop, and up they all rise upon their great white wings. The male is kind and attentive while his mate hatches her two eggs and broods her young. Though they seem so wild and shy, they have sometimes been tamed, running with other fowls, or herding with the cattle.



The American Crane.

6. Nor are cranes so sober and gloomy as the dreary scenes of their life would seem to make them. Indeed, they are jolly fellows among them-

selves. From them the Greeks derived one of their favorite dances. In a solemn and stately manner they will advance toward one another in long rows or processions, make some kind of a



The Marsh Hen.

salutation, and then suddenly break into a ludicrous dance, swinging their legs about, bowing their heads, flapping their wings, and almost turning somersaults.

7. A very small swamp-dweller, not

larger than a quail, is the coot. It has a large, strong bill and exceedingly long toes, which enable it with ease to run over floating branches and leaves. It seems to be about half hen and half duck.

8. The claws of the coot are not webbed like those of the duck, but they have a membrane on the sides of the toes which acts as a paddle. Then its bluish-gray feathers are close and tight, like the

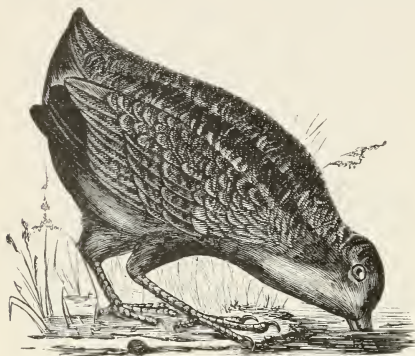
coat of the duck. Nimble on foot and wing, like the scratcher, the coot takes to the water like the duck. It hates the light and sunshine, and steals out in the dusk to gather its food. The rail is a little swamp-dweller, much like its cousin the coot, and in appearance quite like a quail.

9. The marsh-hen of the sea-coast has the air and appearance of a true hen. Of a pretty olive-brown and white color, she is bright and active; can run swifter than a man, and can dive as well as a duck. Although a constantly wet hen, she never loses her temper. If the flood sweeps away her nest, she builds another, and in the warm days of the spring she furnishes delicious eggs for lucky hunters. This little wild hen has sometimes been tamed, and in England it is often found with tame poultry.

10. The woodcock is a very pretty bird to look at, and furnishes a pleasant attraction to the table when it has made the proper acquaintance with the fire. It has much the appearance of the snipe, but is larger and fairer in form and feather. Around the edges of the low ground or the swamp, where there are trees for shade, is its chosen place for play and work.

11. The woodcock has a bright, large eye, but can not see well in broad day. On this account, when it is flushed by the dog, it makes an irregular

flight, and is a difficult mark for the sportsman. During the day the woodcock is at rest, and at nightfall it begins work. The straight, sharp bill, two and a half inches long, and very sensitive,



American Woodcock.

knows where to find the worm, and is thrust into the soft ground and drawn out so quickly that you can scarcely count the strokes.

12. Woodcocks have an affection for

the places they have once chosen to dwell in, and love to return to them. A gamekeeper in France once snared a woodcock, to which he gave its liberty after he had tied to its leg a copper ring. The next year he found his old friend again, with the same leg and the same copper ornament. Tender and affectionate, too, are the woodcocks to the four or five young they yearly hatch. To rescue them from danger, they often pick up the little ones with their bills or claws, and fly away with them to a place of safety.

CHAPTER IX.

GIANTS OF DESERT AND PLAIN.

1. UNLESS we stop to think, there seems to be very little in common between the humming-bird and the ostrich. The one is about as big as the little finger; and the other is larger and taller than a man, and sometimes weighs three hundred pounds. The one has a leg no thicker than a tiny grass-stalk, and the other has the leg of a horse, one kick of which is enough to kill a man.

2. Yet, in some respects, this buzzing little atom and the immense giant are alike. They are both true birds. They are both warm-blooded, both have backbones, both have feathered wings, both have beaks for jaws, both have hollow bones, both have feathers, and both lay eggs from which they produce their young.

3. And yet the ostrich is a queer-looking creature. He has a long, skinny neck, reaching up into the air like that of a camel. He stands six to eight feet high, and can carry a man on his back. The natives of Africa, where the ostrich is at home, call him the "camel of the desert."

4. What strange feet he has, with but two toes, and one of these twice as long as the other! He has a droll appetite for stones; some of those

he swallows are as large as hen's eggs. These stones find their way into his gizzard, and help to



The Ostrich.

grind and digest his food, which consists mostly of reptiles, rats, and birds. When tame, he has been known to swallow nails, copper coins, keys, and the bolts and screws of an iron bridge.

5. One thing brings him into close relation to the humming-bird—his beautiful feathers. With the stubby wings he has, the ostrich can not fly. But, when he runs from his pursuers, these wings give him much friendly assistance. By their help his long legs are able to take steps of twelve or

fourteen feet in length, and to carry him over the African plains with the speed of a railway-train.

6. The egg of the female is equal to twenty-five hen's eggs, and weighs from two to three pounds. She makes a nest in the sand about four feet in diameter. Here she lays, perhaps, fifteen eggs. Then her neighbors deposit their eggs in the same nest, and a certain number are laid aside for the young to eat when they are hatched.

7. The six weeks of hatching are passed in a way that shows much forethought and good sense. The work, for such this laborious sitting must be, is divided between the different females who have laid the eggs, each taking her turn. The male occasionally relieves them, and, during the hottest part of the day, the eggs are left to the sun alone.

8. The young of the ostrich are carefully tended by both parents until they are nearly grown. Dr. Livingstone met with broods of little ostriches led by a male, who pretended to be lame, that he might attract attention from his tender charge. In South Africa, farms, containing thousands of acres, are devoted to the rearing of the birds, for the profit arising from their feathers.

9. In South America—in Brazil, Chili, and Peru—there is a smaller variety of ostrich, called the rhea. It is but half the size of the African bird, and has three instead of two toes.

10. These birds run swiftly, are easily tamed, steal coins and nails to eat, and hate no one but their Indian enemies, who hunt them upon horseback. The male does all the sitting upon and hatching of the eggs—his gentle companions retir-



The Emu.

ing until he brings off the brood. The egg of the rhea is equal to fifteen hen's eggs, and, like the ostrich's egg, is cooked and eaten from the shell.

11. The emu of Australia, next to the ostrich, is the largest of birds. The male bird alone hatches and broods the young. The female is noisy, quarrelsome, and cruel to her offspring. As a household pet it is cunning, and often mischievous. A familiar poem gives a pleasant introduction to this bird :

THE BALLAD OF THE EMU.

12. Oh, say, have you seen at the willows so green,
 So charmingly and rurally true,
 A singular bird with a manner absurd,
 Which they call the Australian emu?
 Have you
 Ever seen this Australian emu?

13. It trots all around with its head on the ground,
Or erects it quite out of your view ;
And the ladies all cry, when its figure they spy :
“ Oh, what a sweet, pretty emu !
Oh, do
Just look at that lovely emu ! ”
14. With large loaves of bread then they feed it,
instead
Of the flesh of the white cockatoo,
Which once was its food in that wild neighbor-
hood
Where ranges the sweet kangaroo ;
That too
Is game for the famous emu !
15. Old saws and gimlets best its appetite whets,
Like the world-famous bark of Peru ;
There's nothing so hard that the bird will dis-
card,
And nothing its taste will eschew,
That you
Can give that long-legged emu !
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CHAPTER X.

SWIMMERS OF LAKE AND SEA.

1. EACH class or family of birds is furnished with such a shape of body, and with such bills, wings, legs, and toes as are necessary for the kind of life it leads, and for the kind of food it is to catch and eat. If a boy is to gather pond-lilies, he may roll up his pantaloons and wade for them, or, if the water is too deep for wading, he must get into a boat and use a paddle or oars.

2. And so it is with birds. If they get their living by wading, they must have long legs to keep their bodies above the water, long necks to bring their heads back to the ground, and long bills to penetrate the mud. If they are to live by swimming and diving, they must have broad bodies for floating; light, oily feathers for keeping out the water; legs set far back for paddles; and long, slender bills for catching food in sight, or broad, flat bills for sifting it out of the mud.

3. Now, here is the flamingo, a wader, swimmer, and flier. It is set upon a pair of walking tongs, that carry it three feet above the ground; with a long, snaky neck, lifting its head two feet higher. The neck of this bird must be long, because its legs are long; but, as it is too long for pushing in the

mud, like the duck, it is made to turn and twist in every way. With this neck, and with its odd beak, the flamingo can bore into the mud with its head upside down. Its body is lithe and boat-shaped, so as to pass easily through air or water.

4. The goose is common in most parts of the inhabited world. It is a much abused bird, but it is not half so silly or stupid as are many of those who slander it. Sharp eyes, sharp ears, a keen smell, and a quick perception, are among the virtues of this bird. A flock of geese was once stolen, and could not be



The American Flamingo.

found. Some weeks afterward the old gander escaped, and appeared before the gate of his home, uttering a harsh scream. When he refused to enter, his master followed his lead to an old barn, where he found the missing flock.

5. The wild geese, that we sometimes see flying high above us, are of a grayish-brown color,

and are much handsomer than their tame cousins. From the shores of tropical Cuba to the icy slopes of Labrador they fly on the path of the clouds, with ocean and land and river and mountain, and the busy life of man far beneath them.

6. They migrate in flocks of from ten to one hundred. They fly either in Indian file forming a single line, or with a second line, branching off from near the head of the column, and forming two sides of a triangle. The strong, old ganders take the lead, and then follow the others in the order of their strength. In the path of the migration, flocks follow one another in rapid succession, sometimes for two days and nights, the whole number being almost countless. In the far North they build their nests and rear their young.

7. While the goose hatches or broods her goslings in the swamp-grass, the gander sails about, with his eye and ear open to every object and sound. There is something surprising in the way these birds judge of the sounds they hear. The branch of a tree may fall, or a turtle may tumble into the water, or a deer crack the bush under its feet, and they give no heed to these things. But, when the tread of the Indian is heard in the brake, or the dipping of his oar in the water, they know the sound of the enemy, and the alarm is given.

8. Ducks are as common in all parts of the

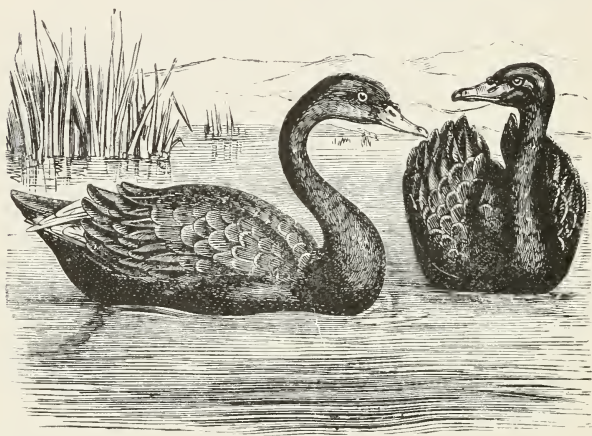
world as chickens and children. They are web-footed swimmers, with feet flatter than those of the goose, and with wide, flat bills, which work in the mud and strain out worms, seeds, and other things that they like to eat. Ducks get nearly their full growth during the first three months of their life. And these young ducks, tender and delicious, are served on many a table as the most tempting dish for festive occasions.

9. Of wild ducks there is scarcely any end. There are river ducks and sea ducks; eider ducks, mallard ducks, and canvas-backs; wood ducks and teal ducks and call ducks. Nearly all are migratory, following the season to the North or to the South. Their flight is very swift; sometimes as many as ninety or a hundred miles an hour. Nearly all make their nests in grass or rushes. The wood duck builds on a stump or a tree. The wild duck is intelligent and crafty. It dives away from the hunter, swims to the shore under water, and creeps up under the grass.

10. Audubon once came upon a female duck with her brood, when the mother raised her feathers and hissed. The ducklings skulked and hid in every direction. His well-trained dog, however, hunted them all out, and brought them to the bag without injury. All this time the old duck fluttered before the dog to draw away his attention.

When the little ones were all in the bag, she came and stood before the sportsman, as if deeply grieved. What could he do less than to give her back her babies? The mother, he says, seemed to smile her gratitude; and he himself felt a great joy in her happiness.

11. For beauty, grace, and gentleness the swan is king of web-footed birds. To all who visit the



The Black Swan.

parks and gardens of great cities it is attractive by its finely arched neck, its white plumage, and its gentle, winding movements. There is also the black swan of Australia, and the black-necked swan of South America. The size of our swan

is great. It has weighed as many as thirty-eight pounds, and has measured ten feet between the tips of its spread wings.

12. The swan is not a bird for the palate, nor for the ear; it belongs to the eye. All the ancient poets have said about its sweet note, and its sweeter dying strain, is very fine, but lacks truth. The swan has an ugly note, but sense enough to keep still. It is said, however, that there is a "whistling" swan in the colder regions of the North and South, that sings as it flies, and its pleasant note is heard at a long distance.



CHAPTER XI.

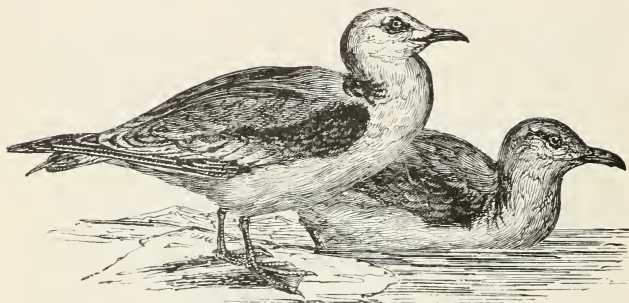
SAILERS OF OCEAN AND AIR.

1. OVER the vast surface of ocean and sea are found in abundance fish, eels, and other creatures of the water upon which birds delight to feed. Success in the hunt and in the feast that follows demands strength of wing to fly long and far, an eye sharp to see at a great distance, a motion quick and sudden to secure the prey, and a shape of foot and body to fit the water as well as the air.

2. The sailers of ocean and air are just the birds for this work. They have wide-stretching

wings, running to a point, so that they slip easily through the air. Their bodies are filled with air-cells, so that they are balloons when they fly, and life-preservers when they float. Their eyes are keen, their flight rapid, and they are supplied with a larger sack of oil than most birds to moisten their feathers and keep the wet from their bodies.

3. The appetite of gulls seems never to be sat-



The Gull.

isfied. They chiefly live upon fish, but many of them hover about the paths of vessels, picking up fragments of food thrown overboard. One of their occupations is to rob weaker birds of their hard-earned game. They even snatch food from the beaks of pelicans. They pipe an unpleasant note, although the laughing sea-mew is so called because of the resemblance of its noise to human laughter.

4. Gulls vary in size, some being as small as pigeons, others larger than ducks. The largest is the burgomaster-gull, a white bird that comes down from the Arctic regions as far south as New York. He is a gluttonous fellow, eating fish, small birds, and carrion. The sea-mew, sometimes called a gull, is small, active, and courageous. All gulls have feeble feet and three webbed-toes. Their



The Tern.

long, tapering wings, when folded, reach beyond the tail, and are busy whirling, tossing, and dropping their bodies in the air. They seldom rest.

5. The tern, or sea-swallow, is the winged fairy among all the sea-fliers. Its body is delicate in

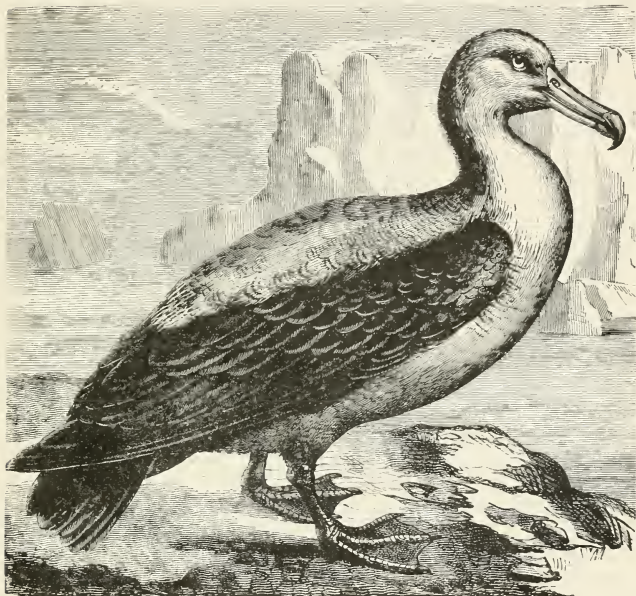
outline; its wings long, slender, and graceful; its color a soft, pearly-white; the cap on its head is black, and the stockings on its legs are coral-red. When the tern flies over the water in search of food, its long bill points downward, giving it somewhat the appearance of a great white mosquito.

6. Terns have a tender sympathy for their own kind. When one is brought down by the sportsman's shot, the survivors fly to the spot and flutter and wail, as if in great distress. Should a tern have the misfortune to lose a wing, its friends bring it food until the time comes for migration, when it must be left to its fate.

7. The terns, while they secure their own food, render agreeable service to the fishermen on the coast. The blue-fish, in their season, drive large schools of smaller fish to the surface, for which the terns cunningly watch. Hence the fisherman has only to keep his eye on the terns to know where to find his blue-fish.

8. An immense sea-flier, three feet long, and seven feet or more in the extent of its wings, is the albatross. Its upper feathers are either white or brown, and it is found mostly in the southern seas, where it visits the village of the penguins to rent a place for its nest. The albatross has wonderful power of wing, sailing through the sea air for many days without rest.

9. The size of a bird does not measure the extent of its courage. The great albatross is often



The Albatross.

attacked, and sometimes torn in pieces, by the little sea-mew. But this feathered sailor braves the severest storms, and is regarded by the human sailors as a bird of good omen. On account of its size, they call it "man-of-war." To distressed seamen it is a welcome visitor, as we find in the "Rime of the Ancient Mariner":

10. "The ice was here, the ice was there,
The ice was all around ;
It cracked and growled, and roared and howled,
Like noises in a swound !
It ate the food it ne'er had eat,
And round and round it flew :
The ice did split with a thunder-fit ;
The helmsman steered us through !
And a good south wind sprang up behind ;
The albatross did follow,
And every day, for food or play,
Came to the mariner's hollo !"

11. There is a bird which the sailors never kill. In the gentle touch of the wave by its three-toed foot it has reminded them of St. Peter trying to walk on the water. So they regard it with awe and superstition, and call it a petrel. It may be as small as a swallow or as large as a goose. It is a dusky bird, like the darkness and the storm which it loves. Living on the fat of fish, it becomes a lump of oil, and men have used it for a lamp by simply drawing a wick through its body.

12. A solemn, weird bird is this stormy petrel. It loves what other birds and men fear. Its home is the ocean, far away from land, save when it seeks some lonely spot on which to lay its single egg and rear its young. It is a mute bird. It makes no noise. With the waves and the winds and the rocking billows it plays. In the storm it rejoices.

When the clouds are low, and the tempest is high,
and the ship is on end, and sailors are terror-
stricken, then the petrel dances, laughs at fear, and
is happy.



CHAPTER XII.

THE STORMY PETREL.

1. A THOUSAND miles from land are we,
Tossing about on the roaring sea,
From billow to bounding billow cast,
Like fleecy snow on the stormy blast.
The sails are scattered abroad like weeds ;
The strong masts shake like quivering reeds ;
The mighty cables and iron chains,
The hull, which all earthly strength disdains—
They strain and they crack ; and hearts like stone
Their natural, hard, proud strength disown.
2. Up and down ! up and down !
From the base of the wave to the billow's crown,
And amid the flashing and feathery foam
The stormy petrel finds a home.
A home, if such a place may be
For her who lives on the wide, wide sea,
On the craggy ice, in the frozen air,
And only seeketh her rocky lair

To warm her young, and to teach them to spring
At once o'er the waves on their stormy wing!

3. O'er the deep! o'er the deep!
Where the whale and the shark and the sword-
fish sleep—
Outflying the blast and the driving rain,
The petrel telleth her tale—in vain;



The Stormy Petrel.

For the mariner curseth the warning bird
Which bringeth him news of the storm unheard!
Ah! thus does the prophet of good or ill
Meet hate from the creatures he serveth still!
Yet he ne'er falters—so, petrel, spring
Once more o'er the waves on thy stormy wing!

Barry Cornwall

CHAPTER XIII.

oar-footed sea-fliers.

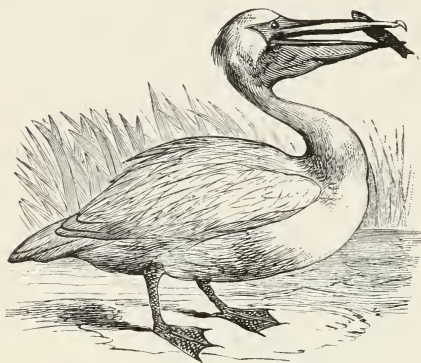
“Through my north window, in the wintry weather—
 My airy oriel on the river-shore—
 I watch the sea-fowl as they flock together
 Where late the boatman flashed his dripping oar.”

1. AMONG the sea-fowl there are some birds of large size and long wing, whose life requires that they sail on the water as well as in the air. For this purpose their toes are fully webbed, and, thus furnished, their feet act like oars to move their bodies when they float.

2. One of these oar-footed sea-fliers is the pelican, which is about the size and shape of the goose, and has a small tail and a monstrous beak. The beak is huge and hooked at the end because it is a fishing-hook, a scoop-net, a game-pouch, and a meat-axe—all in one. We shall see how he uses this beak if we watch the bird carefully.

3. The pelican sails about on his great wide-spread wings, with his keen eye piercing the water below. If we watch closely, we may not see a fish, but he sees one, and pounces down as quick as a gun-shot. In an instant he scoops the game, keeps it from slipping away by the hook in his bill, and pushes it into his pouch or game-bag.

4. Look at this pouch. When the bird is not fishing you would not notice it, for it is a loose skin attached to his under jaw. But when he crams it



The American White Pelican.

with six pounds of fish, as he often does, it grows as large as a man's head. This bird leads the life of a glutton. He is a pig with wings. To eat and to sleep are his main occupation. And

such an eater! His meal of fish would feed six men.

5. Pelicans live in large companies, and their habits are regular. They call for two meals a day — one before sunrise, and the other after sunset. They wake early, rub their eyes, and stretch. There may be a hundred of them standing in a long, white row. If one of them gapes, they all gape. Then they rise, and float away on their white sails toward some nook in the bay.

6. Slowly the long, graceful, snowy line in the air stretches around this corner in the bay, when

they descend to the water. Between them and the shore thousands of little fellows with fins are jumping and dancing in the peep of day. Now the pelicans spread their wings, and flap the water with heavy strokes, driving the small fry closer and closer into the corner.

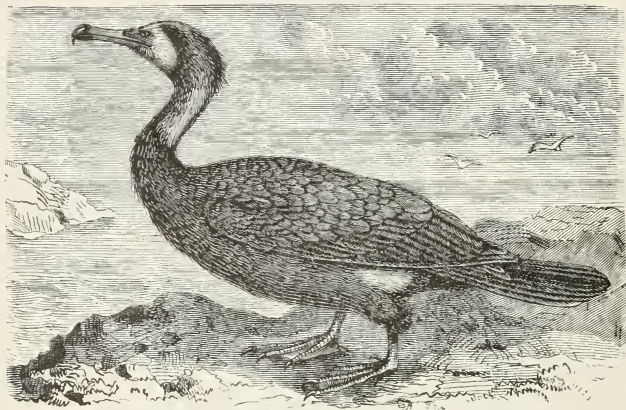
7. Then breakfast is ready, and each one helps himself. The pouches are filled, and the sated flock flies away to a sunny retirement, to swallow and digest their meal, and to sleep away the long, lazy day. When he is ready to eat, the pelican closes and throws up his bill, contracts the pouch, and swallows the prey.

8. Pelicans build their nests in the coarse grass, where each female lays two white eggs. When, after forty days, the young are hatched, the mother-bird treats them with kind care. And this is the way she feeds them: Pressing the point of her bill against her breast, a portion of the fish in her stomach rises, and is emptied into the open mouth of the young bird.

9. The cormorant is a sea-flier and a great eater—as its name indicates. About the same in weight as the pelican, with a shorter neck and a much smaller pouch, it has a more pleasing form, and is clothed with black, shiny feathers, varied with green, purple, and violet tints. The tail is long, fan-shaped, and stiff—helping the bird to

climb up the rocks, and to hold its body erect when it is standing.

10. This bird is very particular about the way in which it swallows game. The fish must always

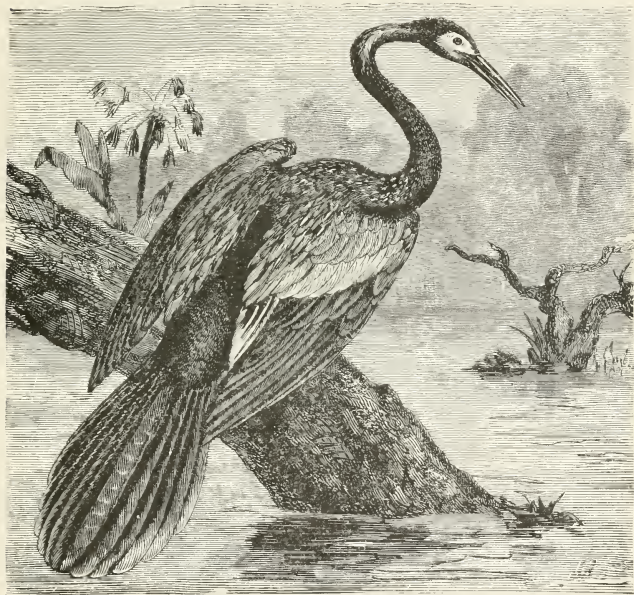


The Cormorant.

go down head-foremost. Should it happen to be sent to the stomach tail first, it must come up and be tossed into the air until it is caught and sent to its destination in a proper position. Eels are very slippery, and do not like to be swallowed. But they are doomed when once they pay a visit to the bill of a cormorant.

11. With a struggle, this bird finally swallows the eel, and we think it is done for. But in a mo-

ment up comes this lively fish, having found that it can crawl out by the same door through which it was forced in. Again it is swallowed, and again it comes up. It is a sad and sober scramble for dear life for the eel, but it is fun for the cormorant.



The Darter.

At last, disheartened and worn out, the poor eel descends to rise no more.

12. The cormorants are sometimes tamed and

made useful as fishermen. By the Chinese they are made as docile and gentle as puppies. To keep them from swallowing the fish they catch, rings are sometimes passed over their necks; but they frequently become so obedient that a dozen birds will dive from a raft and bring up their game, and instantly deliver it to their masters.

13. The darter, with a neck long, crooked, and winding, is sometimes called the serpent-bird. He is longer than the duck, and is formed less like a water-bird. Upon a tree or rock, by the side of river or pond, he sits and watches his prey. When a fish comes within reach, the darter drops down and seizes it, swallowing it whole, if not too large. Again, if this bird is alarmed, it darts down from its perch into the water like an arrow, and often swims for a thousand feet before it appears again on the surface.

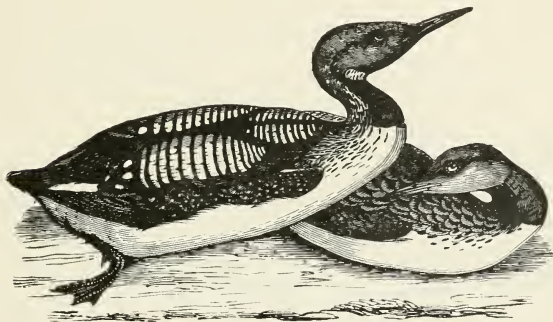
CHAPTER XIV.

SWIMMERS AND DIVERS.

1. THE Vicar of Wakefield remarked that visitors to his house would say, "Well, upon my word, Mrs. Primrose, you have the finest children in the whole country." "Ay, neighbor," she would answer, "they are as Heaven made them,

handsome enough, if they be good enough, for handsome is that handsome does." The loon is fine-looking and well-favored, but, on the principle of Mrs. Primrose, it is not handsome. Some of its actions are not bright, and on this account some people are said to be "as stupid as a loon."

2. From the point of his bill to the end of his tail the loon measures three feet, and his extended



The Loon.

wings measure five feet. As he sits upon a rock, dashed by the blue sea-waves, lifting his straight form to the sky, showing his white breast, and his glossy back of green and black in the sunlight, he looks like a very handsome bird. There is scarcely a better diver than the loon. Rarely does he go down that he does not bring up a fish.

3. No common sportsman can shoot a loon.

The bird keeps his eye on the shore, and, when he sees the flash of the gun, he dives so quickly that the bullet passes harmlessly over him. Then he swims or flies with great rapidity under water, and comes up a long distance from where he went down. But, approached from the sea, the loon becomes stupid. As he sails out with his pretty mate, off on the water, he sees a bright-colored object fluttering in the wind, and out of mere curiosity he sets out to examine it. When so near, that even his quickness of diving can not save him, he falls a victim to the concealed sportsman.



Floating Nest of the Little Grebe.

4. Among the stories of the ancients is that of the halcyon, which made a raft for its nest, and floated out on the tranquil sea, until its eggs were

hatched. It could foretell weather, and while it floated no storms disturbed the air. These were the happy halcyon days. This story is doubtless a fable, but the equally strange story of the grebe is true. The grebe, known as the little grebe, or the crested grebe, is about the size of a small duck. With its legs fastened to the rear end of its body,



The Crested Grebe.

and with toes, each of which is a separate paddle, the grebe is at home on the water.

5. The nest of the grebe is a tight raft, and floats upon the bosom of lakes and ponds. Where the tall rushes and reeds grow it is usually found. Made of closely woven rushes and water-plants, we can scarcely see how it would fail to sink under

the weight of the fowl, or her eggs. The nest, however, is a perfect boat. In this little ark, of reeds, the grebe hatches and broods her young, and here they float like Moses in the ark of bulrushes, hidden among the flags.

6. If some enemy discovers her, this witty bird puts one foot out of the nest, and, using it as a paddle, guides her little palace to safer waters. As soon as the young are hatched, the male leads the little ones into the water, where they swim and are taught to dive. When they grow tired, they mount upon the backs of the old birds. The mother-bird induces them to dive by holding food in her beak, retiring as they approach it, until she tempts them to go under the water to catch it.

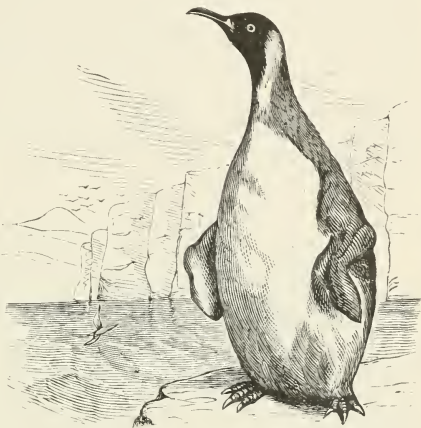
7. Away in the islands of the Southern Pacific Ocean, where summer shines when it is winter with us, lives the penguin. On a bleak, sandy coast thousands of penguins are seen, with white breasts and glossy, brown backs, sitting on their tails, or standing on their short legs, which are far behind, like soldiers drawn up in line.

8. As to order and rule, they are real soldiers. The line is straight and close. The old birds and the fine-looking are together; so also are the young birds, and the birds that are molting and unclean; and if a bird gets into the wrong rank, it is at once thrown out. The short wings of the pen-

guins look more like arms than wings, and are worthless for flight. But they are a great help when they attempt to run on the shore. Then the wings are used as feet. The penguin lays but one egg, which she holds between her warm thighs until it is hatched.

9. Penguins have singular customs about their nests. In October, which is their spring,

they hold a mass-meeting that lasts for a day or two, and is a very solemn affair. Then, upon a rocky beach, they mark out with their bills a large square court, and all hands go to work, and bring in their beaks stones, which they lay up as a wall to inclose the square, and to shelter them from the winds. At the openings, sentinels are placed for the night. The large inclosure is subdivided into small squares, of sufficient size to receive a certain number of nests.



King Penguin.

10. When all this is done, comes the albatross, begging for a chance to place her nest. Here is the strongest flier coming to meet the bird that is most like a fish. With a look of generosity she is assigned to some vacant corner, where she deposits her eggs. Sometimes there is heard in this bird village the cry of "Thief!" when it usually turns out that the king penguin has robbed the nest of the albatross.

CHAPTER XV.

THE MESSENGER-BIRD AND ITS COUSINS.

1. WE have followed our feathered friends into the water, out upon the sea, into the sky and the raging storm, and now we come back to the land and the quiet woods, and see who are there.

"Come with me, if but in fancy,
To the wood, the green, soft shade:
'Tis a haven, pure and lovely,
For the good of mankind made.

"Listen! you can hear the cooing,
Soft and soothing, gentle sound,
Of the pigeons, as they nestle
In the branches all around."

2. The pigeon and the dove are quite the opposite of some of the rough and greedy creatures

of the water and the air. The soft, gentle, timid dove has for thousands of years been the emblem of purity, peace, and the divine presence. It belongs to the family of pigeons, which, in some of their three hundred varieties, are found the world over.

3. The foot of a bird is not its claw alone, but that part of the leg which reaches from the heel



The Passenger-Pigeon.

or first joint down to the ground. Now, the foot of the pigeon is shorter than its claw or toes. It is made for walking as well as for holding to the

twig of a tree. Pigeons do not hop like robins : they walk and run like quails and chickens. Their feathers and tails are long, and they have no down. The wings, too, are long, strong, and pointed, giving them the power of swift and continued flight. The color of wild pigeons and doves is gray, with blue, green, and rose-colored tints.

4. How do pigeons drink? Of course, those who have not observed will say that they drink as most other feathered people drink—by sipping a little water, and then holding up the beak so that it will run down the throat. But this is not their way. They put their bills into the water, and draw up their drink as horses and cows do. And they have an odd way of feeding their young. In the pigeon's throat is a gland or sac which produces a milky fluid ; and this milk is dropped into the bills of the two little ones in the nest during the first two weeks of their life.

5. Pigeons are birds of the air and the tree, though their food is found on the ground, and consists chiefly of acorns and berries. The natural varieties of them are few, but, by careful mating and breeding, men have produced a great number of sorts. The common barn doves we all know ; and the neatly dressed, graceful, and shy turtle or mourning dove, not so long of wing or tail as the wild pigeon, and making the wood resound with

its sad, unpleasant "coo" of four notes. Then there is the rock-pigeon of foreign lands, building its nest in caves and holes—the original parent of our doves, and of the carrier-bird.

6. Very rarely does the railway passenger-train move as swiftly as the passenger-pigeons fly. Au-



Wood-Pigeon on her Rude Nest.

dubon says that pigeons, killed near New York, had crops filled with Carolina or Georgia rice. As the grain would digest in twelve hours, the birds must have made the trip from the rice-region in less than twelve hours, or at the rate of a mile a minute. These pigeons take journeys, not to find a warmer or cooler climate, but to seek the beechnuts and acorns that constitute their food.

7. Their eye-sight must be very keen, for, swift as is their movement, they instantly detect the place where food is, and drop from their airy path to the branches of the forest. The place which they have visited, either for food or for breeding, has often suffered great and lasting damage.

8. Many years ago, in a Kentucky forest, the pigeons occupied, for their nesting-season, a space of country forty miles long and seven miles wide. Audubon visited this region, and gives a very spirited account of it. It was in the month of May. As soon as the young, or squabs, as they are called, were fully grown, and before they left their nests, the people from the surrounding country came to this immense nursery with wagons, axes, beds, and cooking-utensils, and encamped for several days. The noise and clatter of this chattering camp of birds, cooing, and chirping, and piping, was so great that human conversation could scarcely be heard. As many as a hundred nests were found on a single tree. So great was the weight of feathered life, that the branches of the trees gave way, and the ground was strewn with broken limbs and squeaking squabs.

9. The men felled trees with their axes, and thus added greatly to the struggling and helpless youngsters on the ground. It was a scene of heartless carnage. Hawks, buzzards, eagles, and great

herds of hogs enjoyed a perpetual feast. It was dangerous to walk through the woods on account of the falling of the timber, and the droppings of the feathered millions above. And large portions of the forest were as effectually killed as they would have been if girdled with an axe.

10. Audubon has left an account of a remarkable flight of pigeons on their way to this nesting-place in 1813. He tried to count the flocks as they passed, but soon grew tired. On they came, flock after flock, until the thickening masses increased to an immense cloud that obscured the noonday sun. For three days in succession this feathered cloud continued to pass. As it crossed the Ohio River the flight was lower, and the banks were covered with excited boys, who never had better luck in hunting in their lives.

11. And who can estimate the number in that grand procession? Audubon thinks that the mass of moving birds shadowed a territory equal to eighteen square miles, and that there were at least two pigeons to the square yard. This would give to the whole flight more than one thousand million birds; and if each required a half-pint of food daily, the whole multitude would consume, in one day, nearly nine million bushels!

12. The use of pigeons for carrying messages was practiced by the Romans two thousand years

ago. William, Prince of Orange, employed pigeons to carry letters to the besieged city of Leyden in 1574; and so delighted was he with their faithfulness, that he ordered them to be fed on strawberries, and to be embalmed after death. Navigators from Egypt were accustomed to take carriers on board their ships, which they released to return home, from time to time, to bear messages to their families. During the siege of Paris in 1871 pigeons were employed to carry messages to and from the city. These post-boys were out of the reach of the German soldiers.

13. The carrier-pigeon is, by nature, strongly attached to its home. In training, it is taken, perhaps, a mile from home in a basket, and let loose. Then the distance is increased daily, until the bird can be moved to any distance, when, on being released, it will take a direct course for home. When once trained, the letter is tied to its wings or to its feet; he is set free, rises high in the air, makes one or two circular flights, and then darts off in the proper direction like an arrow.

THE BELFRY PIGEON.

14. On the cross-beam, under the Old South bell,
The nest of a pigeon is builded well.
In summer and winter that bird is there,
Out and in with the morning air:

I love to see him track the street,
 With his wary eye and active feet;
 And I often watch him as he springs,
 Circling the steeple with easy wings,
 Till across the dial his shade has passed,
 And the belfry edge is gained at last.
 'Tis a bird I love, with its brooding note,
 And the trembling throb in its mottled throat;
 There's a human look in its swelling breast,
 And a gentle curve of its lowly crest;
 And I often stop with the fear I feel—
 He soars so close to the rapid wheel.

15. Whatever is rung on that noisy bell,
 Chime of the hour, or funeral knell,
 The dove in the belfry must hear it well.
 When the tongue swings out to the midnight moon.
 When the sexton cheerily rings for noon,
 When the clock strikes clear at morning light,
 When the child is waked with "nine at night,"
 When the chimes play soft in the Sabbath air,
 Filling the spirit with tones of prayer—
 Whatever tale in the bell is heard,
 He broods in his folded wings unstirred;
 Or, rising half in his rounded nest,
 He takes the time to smooth his breast,
 Then droops again with filmèd eyes,
 And sleeps as the last vibration dies.

N. P. Willis.

CHAPTER XVI.

GLUTTONS IN FEATHERS.

1. BEFORE we condemn the poor birds whom we can fitly call greedy gluttons, we must carefully study their nature and habits, and learn what work they are called upon to do. They are fitted with hooked beaks, stout wings, and strong legs; but their toes are weak and their claws short, blunt, and but slightly curved.

2. Their sense of sight is keen, but they possess no voice, and can make only a weak, hissing sound. In the United States there are three members of the family—the turkey-buzzard, carrion-crow, and Californian vulture.

3. The turkey-buzzard, our most familiar species, is about two and a half feet in length, has a wing extent of six feet, is blackish-brown in color, with head and neck nearly naked, bearing only scattered, bristle-like feathers. In outward appearance he greatly resembles the turkey.

4. He greedily devours carrion and all kinds of refuse animal matter, usually assembling with hosts of his companions wherever a dead animal is to be found, and there remaining until gorged.

5. The carrion-crow is a shorter but heavier bird than the turkey-buzzard, and with head more

fully feathered. In the Southern States these birds are very numerous, and are frequently met with in the streets of the towns. They also attend the markets and shambles to pick up pieces of flesh thrown away by the butchers, and when an opportunity occurs leap from one bench to another for the purpose of helping themselves.



The Turkey-Buzzard.

6. One winter day in Florida, while drifting idly in our boat, the Bandersnatch, among the beautiful palmetto-crowned islands of the Gulf-coast, we saw, at a short distance, hundreds of turkey-buzzards and carrion-crows circling in the air, and large numbers coming from all directions.

7. We determined at once to discover the cause of the commotion, and rowing to the spot, some two hundred yards distant, found floating in the water the bodies of a number of porpoises. Evidently a school of these creatures had suddenly met an untimely end, and had been washed in by

the tide. Here was a rare chance for our naturalist to obtain a series of skeletons. A line was attached to several of the carcasses, and they were towed to an islet a quarter of a mile distant, and carried well up on the sand.

8. Early the following morning dark objects were seen hovering in the air over Porpoise Islet. With a glass we discovered that the gluttons were assembling, and soon the feast began. During the day several excursions were made to the scene, it being necessary to watch the work of the bone-cleaners, for fear that portions of the skeletons might be carried away. On these occasions a few of the birds kept steadily at work, while others, more completely gorged, took refuge in the palmettos, from time to time lazily flapping their wings, as if to fan themselves. In a short time the skeletons were picked clean, and needed but little work to make them ready for the museum.

9. Another vulture, the condor of South America, is the largest bird that flies. Its length is about three and a half feet, and the spread of its wings ten feet. It is a powerfully-built bird, of metallic black plumage, with white-tipped wings. The head, neck, and front of the breast are bare of feathers, and covered with a hard, dry, and wrinkled skin, with a few short, stiff hairs. The male bird has on the top of the head a crest of

hardened skin. A collar of white silken down separates the naked neck from the feathered



The Condor.

body. The only noise it makes is a hiss like that of a goose.

10. The high region of the Andes is the favorite home of the condor. At night he rests on the ledges of rock, but with the sun's first rays he rouses himself, peers over the ledge into the abyss below, dives downward, but soon rises, and, moving upward in sweeping circles, often ascends to a height of four or five miles. While hovering in the air he will spy out his prey in the valley below. Sometimes it is a lamb or a sheep, or a mule, that has fallen dead on the mountains.

11. True to his nature as a vulture, he will eagerly descend upon dead prey, though he is equally glad of it when alive. Such havoc does he create among the flocks and herds of the mountains, that watch-dogs are trained to bark at the approach of these terrible foes. His talons can not clutch his prey, as do those of the eagle, and he is forced to eat it on the spot. Like the rest of his race, he is a great glutton, and will often eat until he is unable to rise in the air. When in this condition the Indians capture him with ease. The young grow but slowly, and are not able to fly for nearly two years.

12. The vultures of the Old World, though resembling those of our country in their habit of eating carrion, are more hawk-like, and many of them are among the fiercest of the birds of prey.

In warm countries they do great service as scavengers, clearing away all garbage, which, if allowed to remain and decay, would cause pestilence.

13. The secretary-bird, or crane-vulture, of South Africa, has a slender body with a tail of remarkable length, the two middle feathers of which extend far beyond the rest. The foot is long, the toes short, claws of



The Secretary-Bird.

moderate length, but slightly curved and very strong. The head is provided with a crest composed of six pairs of feathers, placed one behind the other, so that they can be either raised or spread, or laid back flat upon one another. These quills, looking like the quill-pens which clerks place behind their ears, have given to him his name of secretary-bird.

14. The peculiar part which he plays, however, is that of a snake-killer. A poisonous snake, when attacked, usually stops, rears itself, and shows

anger by shrill hissings. The bird spreads one of his wings, and, holding it before him like a shield, hops backward and forward in a variety of strange attitudes. Each bite of the reptile is received on the wing-feathers, where the poison is harmless, and is paid by vigorous blows with its other wing. At last the snake is stunned. The bird then catches hold of it, and, after throwing it several times into the air, crushes its skull with his sharp-pointed bill, and swallows it.

15. At the Cape of Good Hope the secretary-bird is frequently tamed, and lives on the most friendly terms with the poultry in the farm-yard, rendering efficient service by destroying intruding rats and snakes.

CHAPTER XVII.

THE SKY KING AND HIS FAMILY

1. THE sky king and his family are day-hunters. They are brighter and more active birds than the night-hunters, though they carry many of the same weapons. The short, thick, angry bill with a tearing hook on the end of it; feet ending in toes curved and sharper than thorns; wings long, strong, and tireless; eyes that can see a hare from the height of a cloud—these are the royal

tools of the hunters of the air. They do not have the help of the darkness, when their prey is asleep.

2. The bird that adorns our coat-of-arms and our silver dollars is the white-headed or bald eagle. When he is sitting he appears in size and weight like a small hen-turkey ; but when he launches into the air and spreads his wings he is a grand bird — three feet in length and four feet in breadth. His head is not really bald ; it is covered with thick white feathers that give it the look of an old man's head. His feathers above are of a brownish-black color, while his tail shows white.

3. The bald-headed eagle loves fish, but he does not like to catch them. From some distant tree-top he watches the fish-hawk struggling with his slippery prey, and, when this weaker brother strikes off to some lonely spot to enjoy his well-earned meal, the eagle darts after him like a winged hyena. Swifter of wing, and stronger of muscle, and having no load, he soon overcomes the hawk, and makes him drop the prey, which he greedily appropriates for himself.

4. The golden eagle is a finer, larger bird. He is not often seen in America. Upon a high rock he builds his nest or eyrie. It is roughly laid up, and often measures five feet square. The eaglets

never number more than four, and are hatched in thirty days. They are great eaters, and to sup-



The Golden Eagle.

ply their ravenous appetites the old birds must work and rob in a lively way.

“ He clasps the crag with hookèd hands ;
Close to the sun in lonely lands,
Ringed with the azure world he stands.
The wrinkled sea beneath him crawls :
He watches from his mountain walls,
And like a thunderbolt he falls.”

5. When this king of the sky is catching his own game, he sails about in graceful circles in the upper air until he sees a sitting hare. Gradually and slowly he descends, lower and lower, until he is seen by his victim. As it can not outrun the eagle's flight, the cunning hunter winds around in constantly decreasing circles until, in an instant, he folds his wings and drops upon his poor, bewildered prey, and makes it fast in his sharp talons.

6. The eagle does not always catch his prey with his beak or his talons, but oftener kills it by the force of his powerful swoop—running his breast-bone against it like the keel of a ship. It has been said that his direct flight is at the rate of sixty miles an hour ; but, whatever may be his speed, he can not overtake the pigeon. Strange stories are told about his warlike encounters with the chamois in the Alps ; his carrying away of kids and lambs ; and of seizing little children in

his cruel claws and bearing them aloft to his eyrie.

7. In Switzerland, a boy ten years old thought it would be a nice thing to rob an eagle's nest. And, indeed, if boys must rob birds' nests, we should say that it is far more manly to invade the home of the eagle, who is able to defend himself, than to impose upon a little robin or sparrow.

8. So our Swiss boy climbed up by a dangerous path to the nest of the eagle, and was just grasping the struggling, squeaking, eaglets when the enraged parent lighted down upon him, seized him in a tight grip, and carried him away six hundred yards. His companions rushed to his rescue, and found him alive and unhurt. It is a relief to know that the boy was saved, and it may be that he was honestly trying to avenge the wrongs of innocent lambs or kids.

9. Most of the birds that hunt in the air by day belong to the class called falcons. The falcon is a reaping-hook, and the weapons of these birds are quite like reaping-hooks. All of them carry the same tearing beak, and all have the same hooked and piercing claws. They lay only from two to four eggs in the year, and it is well for our weaker friends in feathers that these highwaymen of the air do not increase more rapidly.

10. Eagles, buzzards, and hawks are all falcons,

and are closely related. Of hawks, the smallest is the pigeon-hawk, not quite so large as the pigeon he tries to catch. About the same size, and of the same general appearance, but with bright yellow legs, is the sparrow-hawk. Still larger, with his dark-brown upper feathers and dusky white-splashed breast, is the chicken-hawk—the little rascal that darts around the bushes and picks away a chick just after we have finished scaring him away.

11. Then comes the duck-hawk, next larger than the chicken-hawk, finely feathered with dark plumes delicately edged with brown. Next in size is the red-tailed buzzard, or hen-hawk. He is equal to the capture of any member of the chicken-yard; has an appetite for quails and rabbits and prairie-chickens; and in the autumn lazily sits for an hour at a time upon a hay-stack or a dead tree.

12. The fish-hawk is the largest of all. He is black and brown, with white feathers about his head, and is often mistaken for the eagle, for whom he performs unwilling toil. The kite is nearer the size of the chicken-hawk, blacker in feet and feather, slim and delicate in form, graceful and quick in action. He may be seen at times on the lower Mississippi River, getting a free ride on a dead mule, and eating the animal that carries him.

13. And now we will come back to the falcon—the peregrine falcon—the hawk that was the

shot-gun of the Middle Ages. He is such a trim, gamy-looking fellow that any one who loves animals would like to make a pet of him. He is a brave bird, even daring to snatch from the sportsman the game he has killed. His life is long, and one is said to have been caught at the Cape of Good Hope, in 1797, which wore a golden collar with an inscription stating that in 1610 it belonged to James I, King of England.

14. The falcon was trained to catch other birds as long ago as Aristotle, three hundred years B. C. In the Middle Ages gentlemen and ladies nearly always appeared in public with falcons sitting on their wrists. Bishops and abbots carried them into church, leaving them near the altar during service. But the most beautiful exhibition of the falcon was the hunt, or "hawking," as it was called. Kings and noblemen were given to it.

15. Upon elegant horses, with attendants and dogs, they rode to the field. When the bird was seen flying, or was started or "flushed" by the dogs, the falcon was let fly. Then there was a chase in the air, and, in the case of large birds, a fight. When the falcon brought his game to the ground, and it proved to be a troublesome customer, the dogs at once lent a helping paw and tooth. Hawking was an exciting sport in those days, and is even nowadays practiced in Persia and India.

CHAPTER XVIII.

HANNAH LOMOND'S BAIRN.

1. ALMOST all the people in the parish were taking in their meadow-hay on the same day, so drying was the sunshine and the wind, and huge, heaped-up wains, that almost hid from view the horses that drew them along the sward, were moving in all directions toward the snug farm-yards. Never had the parish seemed before so populous. Jocund was the balmy air with laughter, whistle, and song.

2. But suddenly the great golden eagle, the pride and the pest of the parish, swooped down, and away with something in his talons. One sudden female shriek, and then shouts and outcries, as if a church-spire had tumbled down on a congregation at a sacrament—"Hannah Lomond's bairn! The eagle has ta'en off Hannah Lomond's bairn!" and many hundred feet were, in another instant, hurrying toward the mountain. Two miles of hill and dale, and copse and shingle, and many intersecting brooks lay between; but in an incredibly short time the foot of the mountain was alive with people. The eyrie was well known, and both old birds were visible on the rock's edge.

3. But who shall scale that dizzy cliff which

Mark Stuart, the sailor, who had been at the storming of many a fort, attempted in vain? All kept gazing, weeping, and wringing their hands in vain, rooted to the ground, or running backward and forward without thought or purpose. "What's the use, what's the use of ony puir human means? We have no power but in prayer!" and many knelt down—fathers and mothers, thinking of their own babies—as if they would force the deaf heavens to hear.

4. Hannah Lomond had all this while been sitting on a rock, with a face perfectly white, and eyes, like those of a mad person, fixed on the eyrie. Nobody had noticed her; for, strong as all sympathies with her had been at the swoop of the eagle, they were now swallowed up in the agony of eyesight. "Only last Sabbath was my sweet bairn baptized in the name of the Father, and the Son, and the Holy Ghost!" and, on uttering these words, she flew off through the brakes, and over the huge stones, up, up, up, faster than ever huntsman ran into the death—fearless as a goat playing among the precipices. No one doubted, no one could doubt, that she would soon be dashed to pieces.

5. No stop, no stay—she knew not that she drew her breath. Beneath her feet Providence fastened every stone, and to her hands strengthened every root. How was she to descend? That

fear but once crossed her head as up, up, up—to the little image made of her own flesh and blood. Down came the fierce rushing of the eagles' wings, each savage bird dashing close to her head, so that she saw the yellow of their wrathful eyes. All at once they quailed and were cowed; yelling they flew to the stump of an ash, a thousand feet above the cataract, and the Christian mother, falling across the eyrie, clasped her child—dead! dead! dead! no doubt, but unmangled and untorn, and swaddled up just as it was when she laid it down asleep among the fresh hay in a nook of the harvest-field. Oh! what a pang of perfect blessedness transfixed her heart from that feeble cry—"It lives! it lives! it lives!"

6. Where all this time was Mark Stuart, the sailor? Half way up the cliffs. But his eye had got dim, and his head dizzy, and his heart sick—and he, who had so often reefed the topsail, when at midnight the coming of the gale was heard afar, covered his face with his hands, and dared look no longer on the swimming heights. "And who will take care of my poor, bed-ridden mother?" thought Hannah, whose soul, through the exhaustion of so many passions, could no more retain in its grasp that hope which it had clutched in despair. A voice whispered, "God."

7. She looked around, expecting to see an an-

gel; but nothing moved, except a dead branch that, under its own weight, broke off from the crumbling rock. Her eye, by some secret sympathy of her soul, watched its fall; and it seemed to stop, not far off, on a small platform. Her child was bound within her bosom, she remembered not how or when, but it was safe, and, scarcely daring to open her eyes, she slid down the shelving rocks, and found herself on a small piece of firm root-bound soil, with the tops of the bushes appearing below.

8. With fingers suddenly strengthened with the power of iron, she swung herself down by briers, and broom, and heather, and dwarf-birch. Then a loosened stone, leaped over a ledge, and no sound was heard, so profound was its fall. Then the shingle rattled down the steep, and she hesitated not to follow. Her feet bounded against the huge stone that stopped them, but she felt no pain. Her body was as callous as the cliff. Steep as the walls of the house were now the sides of the precipice. But it was matted with ivy centuries old, long ago dead, and without a single green leaf, but with thousands of arm-thick stems petrified into the rock, and covering it as with a trellis. With hands and feet she clung to that fearful ladder.

9. Turning round her head and looking down, lo! the whole population of the parish on their knees! and hush, the voice of psalms! a hymn.

breathing the spirit of one united prayer! Sad and solemn was the strain, but nothing dirge-like; breathing not of death, but deliverance. Often had she sung that tune, perhaps the very words, but them she heard not, in her own hut, she and her mother, or in the kirk along with all the people. An unseen hand seemed fastening her fingers to the ribs of ivy, and in sudden inspiration, believing that her life was to be saved, she became almost as fearless as if she had been changed into a winged creature.

10. Again her feet touched stones and earth. The psalm was hushed, but a tremulous, sobbing voice was close beside her, and lo! a she-goat with two little kids at her feet. "Wild heights," thought she, "do these creatures climb, but the dam will lead down her kid by the easiest path, for oh! even in the brute creatures, what is the holy power of a mother's love!" and, turning round her head, she kissed her sleeping babe, and for the first time she wept.

11. Overhead frowned the precipice, never touched before by human hand or foot. No one had ever dreamed of scaling it, and the golden eagles knew that well in their instinct, as, before they built their eyrie, they had brushed it with their wings. But all the rest of this part of the mountain-side, though scarred, and seamed, and

chasmed, was yet accessible, and more than one person in the parish had reached the bottom of the cliff. Many were now attempting it; and ere the cautious mother had followed her dumb guides a hundred yards, though among dangers enough to terrify the stoutest heart, yet traversed by her without a shudder, the head of one man appeared, and then another, and she knew that God had delivered her and her child in safety, into the care of their fellow-creatures.

12. Not a word was spoken—eyes said enough. She hushed her friends with her hands, and with uplifted eyes pointed to the guides sent her by Heaven. Small green plats, where these creatures nibble the wild flowers, became now more frequent; trodden lines, almost as easy as sheep-paths, showed that the dam had not led her young into danger; and now the brushwood dwindled away into straggling shrubs, and the party stood on a little eminence above the stream, and forming part of the strath.

13. There had been trouble and agitation, much sobbing, and many tears, among the multitude, while the mother was scaling the cliffs; sublime was the shout that echoed afar the moment she reached the eyrie; then had succeeded a silence deep as death; in a little while arose that hymning prayer, succeeded by mute supplication; the

mildness of thankfulness had next its sway; and now, that her salvation was sure, the great crowd rustled like a wind-swept wood.

14. And for whose sake was all this alternation of agony? A poor, humble creature, unknown to many even by name—one who had few friends, nor wished for more; contented to work all day, here, there, anywhere, that she might be able to support her aged mother and little child; and who on the Sabbath took her seat in an obscure pew, set apart for the paupers in the kirk.

15. "Fall back and give her fresh air," said the old minister of the parish: and the circle of close faces widened round her, lying as in death. "Gie the bonny bit bairn into my arms," cried first one mother, and then another; and it was tenderly handed round the circle of kisses, many of the snooded maidens bathing its face in tears. "There's no' a single scratch about the puir innocent, for the eagle, you see, maun hae struck its talons into the lang claes and the shawl! Blin', blin', maun they be who see not the finger of God in this thing!"

16. Hannah started up from her swoon, and, looking wildly round, cried, "Oh! the bird, the bird, the eagle, the eagle, the eagle has carried off my bonny wee Walter! Is there none to pursue?" A neighbor put her baby into her arms, and, shut-

ting her eyes and smiting her forehead, the sorely bewildered creature said, in a low voice, "Am I awake? Oh, tell me if I am awake! or if a' this be the wark of a fever, and the delirium of a dream!"

Professor John Wilson.

CHAPTER XIX.

CATS IN FEATHERS.

1. THE spring sun is beginning to shine bright and warm, though in many places patches of snow still lie upon the ground; here and there in the woods hepaticas and anemones are showing their bright faces; and, if we look closely, pushing away the dead leaves and pine needles, we may find the rosy bunches of our favorite trailing arbutus. We must not shut ourselves indoors this beautiful day. Let us have the lunch-basket brought, packed for a woodland feast; and, when old Dash is harnessed, start for a day's journey of discovery.

2. As we drive along over the country road, on every side our eyes are made glad by the many signs of spring. The alders by the brook are dropping their fringed tassels, the red buds are sprouting on the maples, the tiny ferns are peeping up

by the side of the lichen-covered rocks, and the air is filled with the carol of bird voices.

3. Suddenly we come to a standstill just outside a pair of bars leading into an old apple-orchard. We climb down from the "high wagon," our red setter, Grouse, as usual leading the way. The two children of the party are most anxious to know what can be found in so lonely a spot. Patience is enjoined. Then our naturalist gives his orders. Each of us is assigned a row of the gnarled trees, which we are told to examine, and, finding a rotten hole or cavity, to look carefully into its depths and report what we may discover.

4. The children set about the search with great earnestness. All work in silence save Grouse, who, finding his master engaged, is sniffing eagerly about the field, hoping to start some game for his own amusement. Now a shout comes from one of the children, "I have found a hole, and see something shining and woolly in the bottom." Leaving our own trees, we look into the cavity, and see the something "shining and woolly," but what it is we vainly guess.

5. Now it is the turn for our leader; and he, after one quick look, puts his hand into the hole, and pulls out, by one wing, a fluttering, struggling, frightened little red owl. At first it seems stunned by the sudden change from darkness to

light, but quickly its eyes fly wide open, and its claws clutch at its keeper's finger. He, being an old hand at the business, knows how to hold the little savage firmly while we examine it.



The Screech Owl.

6. And what do we see ! A bird about the size of a quail, covered with soft, fluffy feathers. It has a large, cat-like head, defined by a ruff of feathers, large, round yellow

eyes, and tufts on either side of the head that look like ears. Our instructor pushes away these tufts, and shows us a curious opening into the head, which is the true ear, and he tells us that owls are the only birds provided with an external ear. The bill or beak we see is sharp and hooked, reminding us of the hawks and vultures. The legs are covered with feathers to the toes, and the claws are long, much curved, and extremely sharp.

7. Another plunge of the hand brings out another owl, and then come one, two, three, four, five round white eggs. These last are packed with cotton in a tin box, and placed in a basket with the two owls, whom the children have already named "Tweedledum" and "Tweedledee."

8. As we are about turning to take a final

look before again starting, Grace calls our attention to several curious balls lying near the foot of the tree. Again we learn that, like other birds of prey, the owl, having fed on a mouse or small bird, and swallowed it whole, after a meal ejects from his mouth, in the form of a pellet, the bones, hair, and other indigestible substances.

9. Several orchards are visited during the morning. When noon arrives, we seat ourselves for dinner on a dry, sunny, south slope, near a running brook, from which we gather crisp water-cresses, which give an added relish to our meal. Counting over our spoils, we find ourselves in possession of eight sets of eggs and four old birds for the museum, and two tiny puff-balls of owlets for our own special pets.

10. During our sylvan meal, and on our way home, we ply our bird-lover with questions about owls, as he has seen and studied them; and this, in substance, is what he tells us: Best known to the world, through song and story, is the barn owl. The old ruined castle-towers, that everywhere in Europe rise to view, are the chosen haunts of this well-known species, and nightly its mournful cry is often the cause of alarm to foolish and superstitious people returning late at night to their homes.

11. Our barn owl is smaller than his European cousin, and is found in all parts of the country.

It is of a bright tawny hue, about eighteen inches in length, with a wing-extent of from two to five



The Barn Owl.

feet. It has no ear-tufts, but around each eye a "facial disk" of feathers makes its stare more cat-like. The eggs, from five to six in number, are deposited in rude nests in holes in rocks, walls, and old trees. It feeds on small vermin like rats and mice, and so proves a true friend of the farmer.

12. The horned owls are so called because of the pair of feathery tufts on the top of the head. They are also called cat owls. Our little friend of the morning is a horned owl in miniature, though he is called a screech owl. The great horned owl is about two feet in length, with an extent of wings of from four to six feet. The general color above is brown, with throat and neck white, and breast striped with black. He looks like a fine old general, stately, courageous, and ready for anything that may happen.



The Great Horned Owl.

13. This owl makes a great variety of sounds. At one time he will startle us by barking like a dog, at another he will utter notes like half-suppressed screams, and again will break out into a low, fiendish yell. He commits great havoc in the farm-yard, seizing all kinds of poultry, and preys also upon grouse, ducks, squirrels, and opossums. The

crows are his sworn enemies, and, when an owl is found during the day crouched against the limb of a tree, they all go at him, and with bill and claw, flap of wing and harsh cry, proceed to make his life miserable. Thus, in a measure, they retaliate for the torture he inflicts on other creatures.

14. The gray owls make another group. They have immense heads, smallish eyes, and no ear-tufts. The barred owl, a member of this group, is striped up and down his light-colored breast and sides with bars of dark brown. "A quaint and lively bird; its actions look like antics. He has queer ways for an owl. In the deep woods, and in broad daylight, when all owldom is abed, he will set up his comical half laugh, half cry." He is well called the buffoon of the woods.

15. A much graver person, and the giant of American owls, is the great gray owl. His length is thirty inches. His cry is not unlike that of the screech owl. The little saw-whet, or Acadian owl, belonging to this group, is the smallest member of the family. It is about eight inches long, and makes a noise like the filing of the teeth of a saw.

16. But the smallest of the owl kind I have ever seen is Whitney's owl of Arizona, discovered by an army officer. I have many delightful memories of the days spent with a pleasant party in

the sunny land where this bird has its home. In places the hill-sides and plains are covered thick with the giant cactus—large, fleshy stalks, growing into immense trees, without leaves and almost without branches.

17. Woodpeckers easily make their way through the outer skin of these huge plants, and build a cozy nest in the soft fiber inside. When these nests are deserted, they afford a home for the little owl. We had often seen these holes with the small housekeeper at the door, but he vanished as we came near. Now, what was to be done? The holes were too high to be reached from below, no branches afforded a foothold for climbing, and the whole column was armed with cruel spines, which entered the flesh at the least touch. But numerous failures sharpened our wits. We brought from our camp a ladder, made in sec-



*The Giant Cactus, the Home of
Whitney's Owl.*

tions; and this we put together, the top reaching twenty-five feet from the ground.

18. The attack began. One of the party, wearing a hatchet at the belt, mounted the ladder. A few strokes make a hole large enough for the hand to enter, and a capture is made of both the birds and the eggs. One day's search brings home a rich harvest for our distant museum.

19. One more group, the day owls, must be mentioned. They hunt in the daytime, and in the morning and evening twilight. To this group belongs the beautiful great snowy owl of the North. Its usual white coat is sometimes specked with black. It is rapid in flight, and, falcon-like, strikes ducks, grouse, and pigeons on the wing, and seizes hares from the ground, and fish from shallows.

20. Driving home in the warm afternoon sun, the children nodding on their seats, our naturalist concludes by dreamily quoting from John Burroughs: "All the ways of the owl are ways of softness and duskiness. His wings are shod with silence—his plumage is edged with down."

CHAPTER XX.

POLLY AND HER KIN

1. WE have become so well acquainted with polly in her cage, or on her perch, or sitting in the shop-window, that she seems to be one of us, and we seldom think or ask where she came from. We must, therefore, follow the parrot to its home in South America, where we shall find the macaw—the large parrot, with long, tapering tail, and bright red, blue, green, and black colors. There we shall find these birds of exquisite feather more numerous than blackbirds about our swamps.

2. And here, in their native woods, too, these “pollies” keep up an incessant talking and laughing, all in their own language. The great Humboldt, who has told so much about South America, says it is necessary to have lived in the hot valleys of the Andes to believe that “the shrieking of the parrots actually drowns the roar of the mountain torrents.”

3. Or we may visit the home of the gray parrot, with its tail of deep red, on the western coast or in the interior of Africa. Here there will be the same jolly, great, happy family, all talking, and perhaps vieing with the monkeys in climbing the trees. In their original home, parrots are

clean birds. They rise early in the morning, get their breakfast of fruit or nuts, then take a bath, and return to the trees, where they smooth down their gaudy dresses, and sit and sleep during the hot day.



The Gray Parrot.

4. The green parrot learns to talk in the language of men, but not so well as the gray parrot.

Indeed, polly is not only a great climber, but it is so good an imitator that we must call it a monkey in feathers. The beak of the parrot is unlike that of any other bird. How odd it is—the upper part turning down like a hook, and the under part shaped like a cup. By this beak, polly hooks on to a limb and pulls herself up so that she can catch it with her foot, which has two toes in front and two behind. By her beak she can crack the hardest nuts, and on this account is called a “cracker.”

5. These bird-talkers have done some wonderful talking with their bills and thick tongues. In the sixteenth century a cardinal paid a hundred crowns for a parrot that could repeat the Apostles' Creed correctly. Another parrot could act as chaplain on board of a ship, by repeating the Lord's Prayer. In the year 1822 there was a parrot living in London who sang a number of songs in perfect time and tune. She could ask for what she wanted as nicely as could any human being.

6. Is polly a mere imitator, or does she understand what she learns? Some singular facts may help to answer this question. There was once in England a parrot which was able to speak both in English and Portuguese; and, when addressed in either of these tongues, its reply was in the language of the speaker. Another one, in the hot

weather enjoyed having water poured over her, and when she was satisfied would say, "That's enough." The same accomplished bird would sing and dance; and, if a stranger came into the kitchen, polly would cry out, "Somebody's wanted," or ask, "What's your business?"

7. There was once a parrot in Boston that had been taught to whistle for a dog. One day, when he was tuning up his whistle, a dog happened to be passing by, and, thinking he heard a familiar call, started toward the cage of the parrot, when the bird roughly shouted, "Get out, you brute!" The dog ran at once, leaving the parrot to enjoy the joke.

8. The little parrakeet of South Africa is thought to be the handsomest of all the parrot tribe. It has an emerald-green body, a deep-red beak, a rose-colored ring round its neck, and two long tail-feathers of brilliant blue. It is graceful, lively, gentle, and a good talker. One of these ringed parrakeets, if told to call the cat, would either "mew" loudly, or use the cat's name. It would also play hide-and-seek, and, if the mistress hid under the table, the bird would knock on the table several times to induce her to come out.

9. Our own North America is the native home of a very pretty parrot, called the Carolina parrakeet. It is small, and its coat is mainly of a pleas-

ing green color. A golden collar adorns its neck, and its wings are olive green with yellow tips. In flocks it has been seen as far north as the Ohio River, and individuals were formerly met still farther to the north. A great destroyer of grain-crops, it has made sore enemies, in spite of its pretty ways and its talent for talk.

10. Wilson, the lover of birds, captured one of these parrots that had been slightly wounded in the wing. He carried it in his boat and on land, wrapped in a handkerchief, a thousand miles, when he arrived at the country of the Chickasaw Indians. These people recognized in the feathered traveler an old friend, and it became a bond of friendship between them and its master.

11. The bird sighed for a companion, and called to the wild parrakeets that flew by its cage. A looking-glass was placed before it, in which its own form was reflected, and it appeared to be satisfied. At night it would lay its head against the image in the glass and whisper some gentle note. Very tame at length it became, and learned to speak its own name.

12. An interesting parrot, found in Australia and the adjacent tropical islands, is called the cockatoo. The note it utters is something like "cockatoo"; whence its name. Upon the head it carries a crest of brilliant feathers, which can be

set up or laid down as it may choose. Gathered in large flocks, this species presents a beautiful appearance by the variety of the colors of its plumage. The disposition of the cockatoo is gentle, and it learns to talk and form words into phrases.

13. The cockatoo, by the mischief it makes, creates enemies. The natives remember the plunder of their crops with anything but kindness. So they hunt and kill the cockatoo. They have no guns, but use a weapon called a boomerang. This weapon is made of wood, and is shaped like a sickle. When thrown, it flies in many circles, and in a winding path. A great flock of cockatoos, sitting on the trees near a body of water, is slyly approached by the hunters. When the birds rise in a body, the boomerangs are hurled, one after another, among them, and large numbers drop to the ground with broken necks or wings. The cockatoo, like other parrots, is tamed and petted.

14. A cockatoo was once trained to act a little scene in company with a Newfoundland dog. The dog would sit up quietly, while the bird would walk up his back, over his head, out on the end of his nose, and make a bow to the spectators. Then the bird flew to its master's hand, while the dog picked up a hat, and passed it around for contributions to a fund raised for a humane society.

CHAPTER XXI.

TREE-CLIMBERS.

1. "WHAT! Do you call the woodpecker a friend in feathers? You do? Well, well! May be he is a friend to you book-folks; you have a very soft way of looking at everything that seems pretty about you. But you just turn farmer once, and then see whether this little red-headed rascal is a friend to you. Pretty friend in feathers! If I could, I'd hang every woodpecker in the land. I tell the boys to rob every nest they can find."

2. So said our farmer-neighbor, when it was gently suggested to him that the woodpecker is his true friend. "But what does the red-headed rascal do, neighbor, that brings him your ill will?" "Do? Why, he's an everlasting thief and robber. He steals



The Woodpecker.

our cherries, apples, pears, and strips the husks from our growing corn, and hammers the apple-trees full of holes. There ought to be a law, as there was in old times, giving four cents a head for every dead woodpecker."

3. Perhaps there is a good deal of truth in what our neighbor has said; but we must give the accused "rascal" a chance to be heard before he is condemned. First, however, let us follow the boy-farmer in his exploit to rob the red-head's nest. He has found the tree in which the nest is, for it is easy enough to find the woodpecker's hole in a dry, bare tree. He pulls off his boots, moistens his hands, and hitches and puffs up the trunk of the tree.

4. There is a naked limb, fortunately, right over the hole; it is very slender and partly decayed, but a boy can afford to risk his neck to rob a nest, and especially the nest of a rascal that robs his father. So he sits on the limb, and holds fast with one hand while he bends over and softly passes the other hand into the hole. Scarcely has it entered as far as the wrist when out comes the hand as quickly as if it had been bitten, and the boy slides down the tree much more briskly than he went up.

5. Just look at that boy! How pale he is! And his hands, how they are scratched. What

was the matter? Did the red rascal drive his bill into him? No; worse than that. He put his hand on a snake; and that is the reason why he turned so white, and slid down so hastily, and now sulks away to his home, saying, "You won't catch me trying to rob a red-head's nest again."

6. The woodpecker, then, not only has the farmer for an enemy, but his boy, and the black snake too, who, having surmised that the boy would soon make his annual visit to the nest, has got ahead of him, and is enjoying a feast on six little white eggs, in a house that has cost a great deal of hard labor to build. Well, suppose the woodpecker does steal the fruit, and bore holes in the living trees; does he not, on the whole, do a great deal more good than harm?

7. We must watch these abused friends and become better acquainted with them. They are birds of very fine feather. Do you not know the little downy woodpecker, black and white, and smallest of all? And the hairy woodpecker, a little larger, and with almost the same variegated coat? And the yellow-bellied, and red-breasted, and golden-wing, with crimson crowns or necks, and soft gray feathers, exquisitely penciled with white or gold? These, though not so mischievous as the red-head, sometimes taste fruit. Woodpeckers are good judges of fruit. When they test the farmer's

cherries or apples, they are sure to sample the best and the ripest.

8. But suppose the woodpeckers were all murdered or banished: what then would become of the trees and the fruit left to the mercy of caterpillars and bugs and worms? These insects do far more mischief than the birds do that live chiefly on them, and, when we have given the woodpecker a fair trial, our judgment must be that he deserves all the fruit he gets for the good he does.

9. See what a splendid carpenter the woodpecker is. He needs no scaffold. His little feet have two toes with sharp claws in front and two behind, so that he can cling to the bark of the tree, with his head up or down. His tail-feathers are stiff and help to hold him up. His bill is long, straight, and so formed as to be pick-axe, auger, chisel, and hammer. His tongue is a still more wonderful tool. He has in his head a little machine by which he can push it out far beyond the end of his bill. And on the end of this tongue are little fine points, like the barb of a fish-hook.

10. So, with this fish-hook tongue, the woodpecker can pierce and draw from the tree, even beyond the reach of his bill, a worm or grub; and if the insect is too small to catch in this way, he has a gum, or sticky liquid, that flies to the end of his tongue and glues the game to it. And he is a

great worker. No other bird works so hard or has so tough a muscle. From daybreak to dark he hammers away, his little mate now and then taking his place and giving him a rest.

11. The woodpecker is a skilled worker. He knows by the looks of the bark where the worm is; or, if in doubt, he taps with his hammer until he strikes the place that sounds hollow. To build his nest, he cuts a smooth, round hole, inclined a little upward to keep the rain out, and then down lengthwise of the tree, sometimes five inches deep. He has no delicious song with which to charm his mate. His music is made by the noise of his bill rapping on a hard, hollow tree.

12. "Another trait our woodpeckers have that endears them to me," says Mr. Burroughs, "is their habit of drumming in the spring. They are songless birds, and yet are all musicians; they make the dry limbs eloquent of the coming change. Did you think that loud, sonorous hammering, which proceeded from the orchard or from the near woods, on that still March or April morning, was only some bird getting its breakfast? It is downy, but he is not rapping at the door of a grub; he is rapping at the door of spring, and the dry limb thrills beneath the ardor of his blows.

13. "Or, later in the season, in the dense forest, or by some remote mountain lake, does that meas-

ured rhythmic beat that breaks upon the silence—first three strokes following each other rapidly, succeeded by two louder ones with longer intervals between them, and that has an effect upon the alert ear as if the solitude itself had at last found a voice—does that suggest anything less than a deliberate musical performance? In fact, our woodpeckers are just as much drummers as is the ruffed grouse, and they have their particular limbs and stubs to which they resort for that purpose. Their need of expression is apparently just as great as that of song-birds, and it is not surprising that they should have found out that there is music in a dry, seasoned limb, which can be evoked beneath their beaks.

14. "The past spring a downy woodpecker began to drum early in March on a partly-decayed apple-tree that stands on the edge of a narrow strip of woodland near me. His drum was the stub of a dry limb about the size of one's wrist. The heart was decayed and gone, but the outer shell was hard and resonant. The bird would keep his position there for an hour at a time. Between his drumming he would preen his plumage and listen as if for the drum of some rival. How swift his head would go when he was delivering his blows upon the limb! His beak wore the surface perceptibly. When he wished to change the key, which was

quite often, he would shift his position an inch or two to a knot which gave out a higher, shriller note."

15. Largest of all his tribe is the ivory-billed woodpecker. A splendid bird is he, with a scarlet crest upon his head. The forests and marshes of the West and South are his home, and his work is shown by great heaps of chips that fall at the roots of the pine and cypress trees upon which he works. Among the Indians he is regarded as a hero for his labor, and they wear the head of the ivory-billed woodpecker for a charm.

16. There are other birds that have the climbing feet like the woodpecker, but they do not in the same manner search for food. The toucan, of South America, is, in some respects, like the woodpecker, but its bill looks like a huge, overgrown nose, and is soft and spongy. It is



The Toucan.

not a worker like its cousin we have been reading about, but uses other birds' holes to make its nest

in, and gets its food as easily as it can. But its plumage is beautiful and soft, and is used for ladies' muffs.

17. Cuckoos are related to woodpeckers by their feet, but they have different habits of life. The ground or California cuckoo, or chapparal cock, is a fine-looking bird, nearly as large as the crow, with glossy and variegated green feathers, shy, and swifter on its feet than the horse. The European cuckoo is the cuckoo of the poets and of song. It is the harbinger of spring. But there are some queer things to be said about it.

18. This cuckoo lays her eggs at too long intervals to be hatched at the same time. So what does she do? She lays her eggs in other birds' nests, one in each nest, or, laying them on the ground, carries them in her bill and deposits them in these nests. So Mrs. Wren or Mrs. Bluebird, or some other patient sitter, hatches out the young cuckoo and rears him. But when the little wretch has grown big enough he tumbles his step brothers and sisters out of their home.

19. The American cuckoo does no such strange things. She builds her own nest, and hatches and broods her young like a good, faithful mother. About the size of a turtle-dove, she is clothed in Quaker brown, and is a deft, sprightly bird. The simple note, coo, coo, coo, from the thicket, an-

nounces the presence of the male, and, when it is most clamorous, is taken as a sign of approaching rain.

THE CUCKOO.

1. O blithe comer ! I have heard,
I hear thee and rejoice.
O cuckoo ! shall I call thee bird,
Or but a wandering voice ?
2. While I am lying on the grass,
Thy loud note smites my ear !
From hill to hill it seems to pass
At once far off and near.
3. I hear thee babbling to the vale,
Of sunshine and of flowers ;
And unto me thou bring'st a tale
Of visionary hours.
4. Thrice welcome, darling of the spring !
Even yet thou art to me
No bird, but an invisible thing—
A voice, a mystery.
5. The same whom in my boyhood days
I listened to ; the cry
Which made me look a thousand ways
In bush, and tree, and sky.

6. To seek thee did I often rove
Through woods and on the green :
And thou wert still a hope, a love ;
Still longed for, never seen !

7. And I can listen to thee yet ;
Can lie upon the plain
And listen, till I do beget
That golden time again.

Wordsworth.

CHAPTER XXII.

DIVERS OF THE AIR.

1. ALONG the quiet, shady brooks, where bending willows gently touch the still water, or perched upon the scraggy top of some tall tree that leans over a woody river—there we may see the kingfisher. He deserves his name, for he has a royal look. Upon his head he wears a kingly crest, and shades of blue glimmer on his back, making a showy contrast with the white, thick, oily plumage below, and the white collar about his neck.

2. A royal sportsman is this kingfisher, as weary, luckless boys well know, who have watched him as he stands, still as a statue, on some stone or overhanging bough, and then shoots down like a

meteor and carries off the fish which was nibbling away at their baits. "Oh, if we could only catch fish like him!"

sigh these drooping boys, as they bait and throw their hooks, and jerk, and wonder, and scold at crafty perch or chubs, because they will not be caught. But it is serious business with our bird, for he must get his fish, or starve; while our disappointed boys are only fishing for fun.



The Belted Kingfisher.

3. Mr. Darwin says the kingfisher always beats his fish before he swallows it, to express his emotions. His emotions must be lively ones, and we may wonder what they can be. Is it because he is glad, or because he is hungry, that he takes a perch by the tail and lashes him first on one side and then on the other of the limb of a tree? It is said that in the zoölogical gardens where he is confined he treats his beefsteak in the same way.

4. Now, we will leave Mr. Darwin to settle the matter of emotions, but we must conclude that the

kingfisher beats his fish for the same reason that a cook beats his steak—because it is tough. A perch has very angry fins, too, and a rough tail, that are not pleasant to think of in close connection with the tender throat and crop of a bird. It surely seems wise to beat and break these fierce and jagged instruments before they are sent upon a journey so sensitive and perilous.

5. It is pleasant to think of bird-life so airy and serene; pleasant to think that bird-bread may be earned so easily; and pleasant to think what rare fun it must be for the kingfisher with his long, stout, sharp bill to strike for his game, and scarcely ever miss; and then rise upon his happy wing to some high limb where he can express his emotions and enjoy his meal. But stop! Life is not always a smooth and unvexed current even for our happy kingfisher. He sometimes gets a bone in his throat, or chokes with a fish too large to swallow; drops from his lofty breakfast-table and floats down the stream to be devoured by some ravenous pickerel.

6. The kingfisher, though possessed of a good appetite, has an eye to future wants, and in some hole in the bank of a stream he stores away his surplus game for a rainy day, or for a time when his luck is poor. The nest of this bird is a piece of cunning architecture. Several feet above the

water-line, in the bank of the stream, a smooth, deep hole is made, at the end of which a larger room is scooped out. Here the nest is built. First there is laid up a platform of fish-bones, to keep the eggs from the moist ground; then upon this curious foundation the soft nest is placed, the white eggs are laid, and the young are hatched.

7. Birds, as we have already seen, are not all free from moral imperfection. The kingfisher is not a saint or an angel. True parental affection is on the side of the mother. The father is said to cherish cruel feelings toward the little ones. If not prevented by the watchful mother, he drags them from their downy nest and even kills them.

8. But this bird has an honored history. He it is that was called by the ancients the halcyon. And for seven days before and seven days after the winter solstice, when the halcyon was supposed to build its nest, the sea was calm, and those were happy days. The dead body of the kingfisher was thought to keep away thunderbolts, and to bring beauty, peace, plenty, and prosperity. So, among some unlettered people of to-day, the head of the kingfisher is believed to be a charm for love, a protection against witchcraft, or a pledge of fair weather.

9. There lives in the Malay Islands a larger bird than our kingfisher—being eighteen inches



The Racket-tailed Kingfisher.

long — called the racket-tailed kingfisher. Like so many of the tropical birds, it is dressed in beautiful plumage. The bill is coral red, the back and wings are purple, the upper parts bright azure blue, and the breast white. Two exceedingly long tail-feathers extend away beyond the ordinary tail, ending in points shaped like spoons.

10. A very odd member of the kingfisher family is the giant kingfisher, or laughing jackass. Its home is Australia, and its peculiar name arises from its strange

cry and its queer actions. The diet it feeds upon is not confined to fish, but includes insects, rats, and snakes. When the sun rises and when it sets, the laughing jackass sets up a lively chant, on account of which it has been called the "settlers' clock." This music has been compared to the "yelling chorus of unquiet demons."

11. Any event out of the usual course calls forth the peculiar strains of the laughing jackass. If a fire is lighted, or a stranger arrives, or a native encamps, a few of these droll birds consider it their special duty to draw near, and from some overhanging branch pour down their contemptuous, braying laughter. A vile criminal was once caught by means of these intruders. Just in advance of his pursuers, he had taken to the thicket. The birds saw the fellow, and thought it a fitting opportunity for a laugh. So they hovered over the hidden culprit and began their hideous noise. Of course, the officers caught him, for they well knew the habits of the birds.

12. The hornbill, that lives in Africa, Asia, and in some other tropical localities, is remarkable chiefly on account of its ugly nose. On the top of its beak, and in front of its head, rises a helmet, or horn, that gives it the appearance of a feathered rhinoceros. No particular use has been found for this uncouth horn, unless it be to call attention to

the amiable and affectionate traits of the bird. If any further sign of the presence of the hornbill is needed, it may be found in the attack which its equally unpleasant croak makes upon the ear.

13. The food of the hornbill is carrion and fruits, though it sometimes eats nutmegs, from



The Rhinoceros Hornbill.

which its flesh is said to become quite savory. The female makes her nest in the hole of a tree, and, from the moment she begins to sit until her young are old enough to shift for themselves, the male exhibits a remarkable degree of wit and paternal affection.

14. It is well known that the poultry-woman sometimes finds it a hard task to keep a sitting hen on her nest. The hornbill proposes to run no risk on this point. When, therefore, his mate has placed herself on her nest in the hole, he plasters over the hole, leaving only a small crack through which he can run his delicate bill. Through this opening the sacrificing parent passes all the food that the

mother and her brood require. They become very fat, but he becomes very poor.

15. It would be a pleasant relief to us in the summer, when wasps and hornets, carrying their painful weapons, come in at the windows and disturb the peace of quiet householders, if we had some airy friend who would make a business of chasing, punishing, and, if need be, killing these pestering visitors. Such a friend the inhabitants of Europe enjoy in the bee-eater. A very attractive friend it is, too; for it has a graceful body covered with feathers of brown, blue, green, and red. Its beak has a gentle curve, and its wings are long and pointed, giving it a rapid flight.

16. The bee-eater dives in the air, and takes much of its prey on the wing; and it will not only overtake a wasp or hornet, but it will turn and twist in the air, suiting its flight to all the motions of these smaller fliers. Its nest is built in much the same manner as that of the kingfisher. The form and actions of the bird resemble those of the common barn-swallow. In the island of Crete, boys catch the bee-eater with a pin-hook baited with a grasshopper. But this pretty bird has its objectionable characteristics. It likes the honey-bee as well as the wasp. Hence, the bee-eater is the enemy of the bee-keeper.

CHAPTER XXIII.

FAIRIES ON THE WING.

1. By the Indians the humming-bird is called a "living sunbeam." And so it is; it brings into dancing, dashing, darting life all the bright colors that are folded asleep in the sunbeam. It has no voice, no sweet note for the ear; but it has life and beauty for the eye. We may wonder why the old poets have not sung of its beauty. But the old poets had no humming-birds; and, besides, the humming-bird is itself a winged poem.

2. Nature has not bestowed every variety of her treasure on any one bird. Where she gives song and a sweet note, she clothes with a sober and modest dress. And where she lavishes her richest tints, she withholds the beauty of music. Neither does she tire the eye or ear. The birds of most gaudy color must be sought in the wild tropical forest; the finest singers put by their instruments after nesting-time; and if you would see the richest hues of precious stones flashing from the humming-bird's feathers, you must look quick. It is here, but in an instant it is gone.

3. The humming-bird does not seem to know that it is so beautiful. It is one of the busiest of feathered workers. All its tools are fitted for the

particular use required. The bill is curiously made, and in each variety is suited to the particular flower it is to feed upon. Some bills are straight, and some are slightly curved, but every bill is long and sharp-pointed. Its tongue reminds us of the woodpecker. Far out beyond the end of the beak this tongue can be thrust, so that the bird can sound the depths of honeysuckle and trumpet-flower. Its food is the sweet or honey in the flower, and the insect that may happen to linger within the petals of the blossom.

4. And now can you see any reason why the humming-bird should be so very small? or why its feet are so tiny and weak, while its wings are so strong and never tire? Look at the flowers when their season comes: how they lift themselves away from the ground and extend their forms far beyond the end of the twig that bears them, and away from any standing support. To reach the calyx of the flower, where the sugar is, the bird must be either as small as a bee, so that it can crawl in, or it must be able to stand on the air while its long bill and tongue reach to the bottom of the tube.

5. This is just what the humming-bird does. It is so small, and its wings are so strong and lively, that it can stand on the air and suck nectar from the lips of a flower, the vibrations of its

wings being so rapid that no person can count or estimate them. Its little pump works briskly, and its wing hums and buzzes long. More than a hundred flowers a minute are made to yield their sweets. And, besides the honey, any small insect beyond the reach of the bill is touched by the tongue, and attached by the mucilage on the end of the tongue.

6. The humming-bird is a rare little artist. Its nest is a masterpiece of skill. In the air this bird is protected by its smallness and swiftness. In the nest its small size and its cunning are a defense. The male brings the materials, and the female arranges them. The outside of the nest is of lichen or moss, and the inside of soft or woolly substance. In the most artistic manner these materials are woven together, and cemented with the bird's saliva. The finishing on the inside is composed of the finest silky fibers gathered from plants.

7. This pretty little fairy cradle is no larger than a large hickory-nut; is suspended from a leaf, or twig, or bundle of rushes, according to the particular species of bird that builds it; and the outside is covered with moss and other substances so arranged that you could scarcely tell it from a small dry knot. The female lays in this little disguised pocket, twice a year, two pure white eggs, each about the size of a pea. Though so very

small, these birds are brave. Often they defend their nests against larger birds, and against the



The Nest of the Humming-Bird.

sly attacks of a great spider that spins his net over the nest, or lies within it awaiting the return of the absent occupants.

8. It is not surprising that the charms of these winged jewels should have suggested the wish to

win them to the condition of pets. But the little creatures will not bear confinement. They are creatures of the air, and they must be free. A humming-bird was once found sitting on her nest. The branch to which the nest was fastened was cut off, and both bird and nest carried on ship-board, in the hope of conveying them to England, where there are none of these birds. The mother soon hatched her young, which takes but six days, and grew tame, but died before reaching land. The little ones arrived in England and were partly raised, but finally fell victims to the cool climate.

9. In the United States there are seven species of humming-birds. The ruby-throat abounds almost everywhere. Other kinds are found on the Pacific coast, in the South, and in Mexico, but the region where they are most numerous is in the tropical portions of South America. Here there are over three hundred species. Since their richly-colored plumes have become an article of dress, the catching of these feathered dwarfs has grown into a large business. The manner in which they are captured is thus described :

10. "Let us follow little Dan, the oldest and sharpest of the humming-bird hunters, as he goes out for birds. First he goes to a tree called the mountain palm. Beneath the tree are some fallen leaves fifteen feet in length; these he seizes and

strips, leaving the midrib bare—a long, slender stem tapering to a point. Upon this tip he places a lump of bird-lime, to make which he had collected the thickened juice of the bread-fruit, and chewed it to the consistency of soft wax.

11. “Scattered over the savanna are clumps of flowering bushes, over whose crimson and snowy blossoms humming-birds are dashing, inserting their beaks into the honeyed corollas, and resting upon some bare twig preening their feathers. Cautiously creeping toward a bush, upon which one of these little beauties is resting, the hunter extends the palm-rib with its treacherous coating of gum. The bird eyes it curiously, but fearlessly, as it approaches his resting-place, even pecking at it; but the next moment he is dangling helplessly, beating the air with buzzing wings in vain efforts to escape the clutches of that treacherous gum.”

THE HUMMING-BIRD.

12. “Brave little humming-bird,
Every eye blesses thee;
Sunlight caresses thee,
Forest and field are the fairer for thee.
Blooms, at thy coming stirred,
Bend on each brittle stem,
Nod to the little gem,
Bow to the humming-bird, frolic and free.

13. "Now around the woodbine hovering,
Now the morning-glory covering,
Now the honeysuckle sipping,
Now the sweet clematis tipping;
Now into the bluebell dipping;
Hither, thither, flashing, bright'ning,
Like a streak of emerald light'ning:
Round the box, with milk-white phlox;
Round the fragrant four-o'clocks;
O'er the crimson quamoclit,
Lightly dost thou whirl and flit;
Into each tubèd throat
Dives little Ruby-throat."
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CHAPTER XXIV.

MOTH AND FLY HUNTERS.

1. IN the farm-yard, as we saw, there were little creatures that ran away from the fowls, and from the hot sun, and hid in the dirt, in the shade of the bushes, or under sticks and stones. Many of these creatures have wings, and, when the sun has gone down, they leave their hiding-places and rise into the cool, free air to play, to visit their friends, and to come in at our open windows.

2. Not even the most active of our winged

friends, whom we have seen thus far, are able to catch a night-beetle on the wing. Our kingfisher can dash down and snap up his minnow ; but we should no more think of setting him to catch a dragon-fly, with that long, pointed beak of his, than we should give a boy a pair of tongs to catch a ball.

3. But we have other birds that are equal to the task. The night-hawk, whip-poor-will, and king-bird belong to this group of insect-hunters, and, if we will carefully look at their beaks, we shall see how, in part, they succeed. The two hands of a boy, brought together at the wrist and spread open like a mouth to catch a flying ball, give us a good illustration of the open beaks of our hunters when catching insects in the air.

4. The night-hawk, the whip-poor-will, and the chuck-will's-widow, are similar in many respects. They each have that wide gaping of the mouth, which aids them greatly in the capture of their flying prey. A soft, downy plumage, like that of the owl, covers them, and they have short legs, small feet, wide tails, and long, sharp wings for rapid and easy flight.

5. In England the night-hawk is called the night-jar, or goat-sucker. It is not a feathered cat, like the owl, nor is it strictly a night-bird. It makes its appearance toward the close of day, and

for an hour or two is busy at work. It flies a short distance in a straight line, and then abruptly turns in another direction, but all the time slowly mounting upward. At each turn in this zigzag course it gives out its one unmusical note.



The Night-Hawk, feeding on the Wing.

6. When at a sufficient height it suddenly shoots downward, swift and straight as an arrow, its course ending in an abrupt upward curve. At the lowest point of this headlong dive, we can hear a loud, booming cry, like the prolonged sound of the syllable

“whoo.” This is its harvest-time, for now its game is abroad. It flies until twilight fades into night, or later if the moon shines brightly.

7. The night-hawk is frequently seen flying about cows, sheep, and goats. By close watching it is found that the mischievous flies that pester these animals attract the bird. On this account the night-hawk and the tenants of the farm-yard have always been good friends. It is quite possible that this kindness has been misjudged; and the little bird that was helping the goat to chew

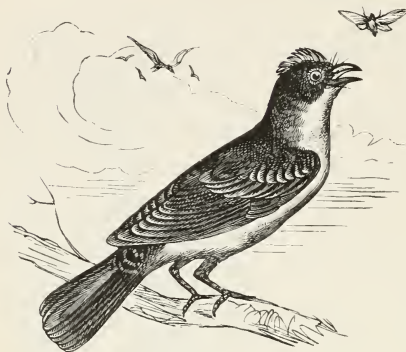
its cud in peace has been charged with stealing milk. Hence, as far back as the time of the ancient Greeks, it has borne the name of goat-sucker.

8. Crouching upon the ground, or sitting lengthwise of a fallen tree, may be seen, after nightfall in May, the soft little whip-poor-will. It begins its work about the time when the night hawk retires. A true night-bird is the whip-poor-will, and as it sends out upon the still air its clear, flute-like note, that warbles the chastisement of "poor Will," we may well honor it with the name of nightingale.

9. A somewhat larger bird, but of the same form and dusky-brown color, is the southern chuck-will's-widow. In the pine forests of South Carolina it makes the whole night melodious with a sweet, plaintive tune. "Even the soft, full-toned, and richly varied song of the mocking-bird, with which it is often blended, can not drown the sweetly-cadenced voice of this plain, modest bird, as he sits and 'chucks will's-widow' away during the live-long night."

10. The kingbird, tyrant fly-catcher, or bee-martin, as he is called, wears upper feathers of ashen-blue, and under plumage of bluish-white. He is quick and keen. Sitting on the top of a post, he watches the passing of an insect on the wing, when, with a dash and a whirl, he seizes the prey and returns to the same perch. He selects the

drones among bees, because they have no sting. But for every bee he captures, he kills a thousand harmful insects.



The Kingbird.

11. In the kingbird, the hawk, and even the eagle, find their match. They are large and strong, but he is small and active. The eagle may fly high; but this

little tyrant will fly higher until the favorable moment comes, when, like a swift arrow, he drops upon his giant foe and inflicts a severe wound in the back of his neck. Though a cousin of the kingbird, the pewee, or phoebe-bird, is less disposed to quarrel, and is not nearly so bright and alert.

THE PEWEE.

12. To trace it in its green retreat,
 I sought among the boughs in vain;
 And followed still the wandering strain,
 So melancholy and so sweet,
 The dim-eyed violets yearned with pain.

.

13. Long-drawn and clear its closes were—
As if the hand of Music through
The somber robe of Silence drew
A thread of golden gossamer ;
So pure a flute the fairy blew.
Like beggared princes of the wood,
In silver rags the birches stood ;
The hemlocks, lordly counselors,
Were dumb ; the sturdy servitors,
In beechen jackets patched and gray,
Seemed waiting spell-bound all the day
That low, entrancing note to hear—
“Pe-wee ! pe-wee ! peer !”

14. I quit the search, and sat me down
Beside the brook, irresolute ;
And watched a little bird in suit
Of somber olive, soft and brown,
Perched in the maple branches, mute ;
With greenish gold its vest was fringed,
Its tiny cap was ebon-tinged,
With ivory pale its wings were barred,
And its dark eyes were tender-starred.
“Dear bird,” I said, “what is thy name ?”
And thrice the mournful answer came,
So faint and far, and yet so near—
“Pe-wee ! pe-wee ! peer !”

Troubridge.

CHAPTER XXV.

GOSSIPS AND THIEVES OF ORCHARD AND
WOODLAND.

“The river was silent, and could not speak,
For the weaver winter its shroud had spun ;
A single crow, on the hillside bleak,
From his shining feathers shed off the cold sun.”

1. EVERYBODY knows the crows and ravens that hang about fields that are skirted by woods; though everybody does not mark the difference between these two species of black-feathered creatures. The raven is about two feet long, and the crow is a half foot shorter. Their habits are nearly alike. They are strong fliers, build rude nests in tall trees, eat nearly everything, are not very honest, and make the air noisy with their cawing and talking, about and across the fields.

2. Ravens and crows do some good when they drop down and pick up the grubs and cut-worms that are waiting to attack the farmer's young corn. But they are also fond of corn, and seem to think that the farmer has planted it in straight check-rows for their special benefit. It is this mistake on the part of the crow that induces the farmer to erect statuary in different parts of his field, called “scare-crows”; but although they are dressed out

in the image of very ugly men, the crow often sees the joke and does not scare.

3. These birds are intelligent, and may be tamed. Sto-

ries are told

about them

which show

that they possess something

like reason. A

gentleman tells

the following

story of the raven: "When I

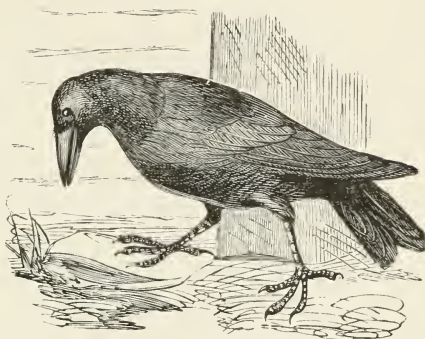
was a boy at

school, a tame raven was very attentive in watch-

ing our cribs or bird-traps, and when a bird was

taken he endeavored to catch it by turning up the

crib; but in so doing the bird always escaped, as



The American Crow.

he could not let the crib go in time to seize it.

4. "After several vain attempts of this kind, the raven, seeing another bird caught, instead of going at once to the crib, went to another tame raven and induced it to accompany him, when the one lifted up the crib, and the other bore the poor captive off in triumph."

5. At a certain inn in England, a tame raven was kept who was called Ralph. A gentleman

driving to this inn accidentally ran over and bruised the leg of a favorite Newfoundland dog. While the dog was being tied to the manger of the horse, Ralph was watching, cawing, and talking with deep interest. It seemed that Ralph had been brought up with the dog, and the two were strongly attached, and often performed kindnesses to each other.

6. After awhile the dog broke his leg, and during the whole time in which he was confined the raven waited on him, bringing bones and other food for him to eat. One night the stable-door had been shut, so as to leave Ralph on the outside; but early in the morning the hostler found that the faithful bird had almost picked a hole through the door, by which he might enter.

7. To call these birds gossips may not be altogether a play upon words. It is known that crows have twenty-seven distinct cries or calls, and that each utterance has some connection with particular actions. Therefore, it may be that crows talk to and understand each other. Tame crows have been taught to mimic other birds, and to repeat names; and sometimes they are very intelligent in this respect.

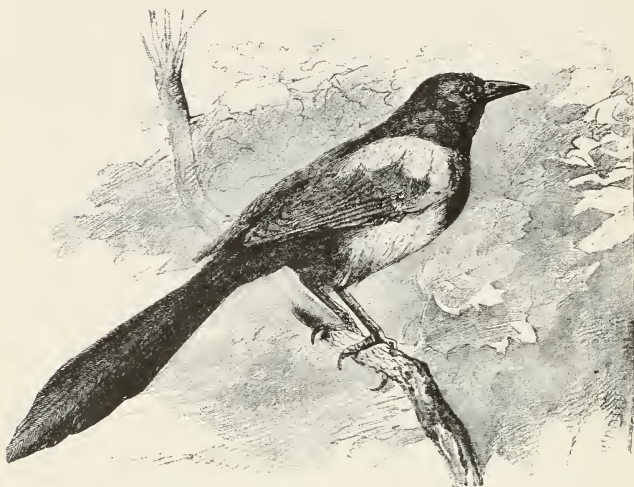
8. The rook is a smaller cousin of the crow, and abounds in England, where it is domestic like our robin. Rooks build "rookeries" in clusters of

trees, where immense numbers of young are raised. The jackdaw is like the rook in appearance and habit, and the two are great friends. The jackdaw is more lively than the rook, and more mischievous. He loves to build his nest in steeples and nooks of churches and colleges. Their association with moral and religious institutions does not seem to affect the morals of the jackdaws. They are given to dishonest tricks. They pilfer from the house bits of linen, and steal all sorts of things, of which they build their nests.

9. The magpie, in America, is found chiefly in the far West. Related to the crow family, it is more showy than most of its cousins, having beautifully-colored feathers of blue, green, and white. It lingers about the western herds, annoys the tents of campers, and lives largely upon carrion. In England this bird is sociable, and easily tamed. Young partridges are not safe in its presence, and, if a hen with her brood does not keep a sharp lookout, the magpie will eat her innocent chicks.

10. Captain Charles Bendire, U. S. A., tells a good story about his setter and the magpies, which very craftily robbed it of its bone. While at Fort Lapwai, Idaho, the magpies were very numerous. His setter Rock would frequently carry a bone to the front of his master's quarters to gnaw at leisure. "After a while four or five magpies would

come about him, and watch their chance to get a pick at the bone. In order to accomplish this, one



The Magpie.

of the birds would station itself about a foot from the dog's tail, the other three or four taking their positions in front, on the sides of the dog's head. The bird in the rear would watch for a chance when Rock was occupied with his bone, and make a sudden dive at the extremity of his tail.

11. The enraged dog would jump around, forgetting his bone, and trying to catch his tormentor. The bird would then leisurely escape. The re-

maining birds, in the mean time, devoted themselves to the bone, and would carry it away, if small enough; if too large, they would pick at it till the dog returned and drove them away. "I have seen the same birds pursue these tactics repeatedly," says the writer, "and at every fresh attack a different bird took his position in the rear. I was able to make sure of this, as the tails of these birds are seldom, if ever, alike. They made these attacks systematically, and acted in perfect accord with each other, as if by a previous understanding."

12. Our crow family is not complete without the jay—



The Blue Jay.

known to all country-boys. His high crest, black whiskers, blue wings and tail, tastefully bound with black and white, render him a pleasing object for the eye; but his character can not be judged from his looks. He is the fop among birds, proud, loud-mouthed, and seemingly useless. The jay's character is not good. He quarrels,

and drives away other birds of softer disposition, and woe to the robin, or oriole, or sparrow, whose nest comes in his way. He eats the eggs of other birds, and destroys their young.

13. It is pleasant to find that he sometimes meets his match. Audubon says: "The cardinal grossbeak will challenge him, and beat him off the ground. The red thrush, the mocking-bird, and many others, although inferior in strength, never allow him to approach their nests with impunity; and the jay, to be even with them, creeps silently to it in their absence, and devours their eggs and young whenever he finds an opportunity."

CHAPTER XXVI.

SHINY-COATS.

1. THE bird-world is a curious and interesting scene, and our feathered friends, when we think of them all, never cease to fill us with pleasure and surprise. If we could stand them all up in a row, what a strange sight they would present. What sizes, forms, feathers, wings, bills, and feet! The ostrich is a giant and the humming-bird is a pygmy. The bird-of-paradise is as splendid as a rainbow, and the swift is as dull as a cloud. The stormy

petrel sails upon a wing that never tires, and the penguin crawls with a wing that can not fly.

2. In the beaks, legs, and claws of quails, humming-birds, night-hawks, eagles, woodpeckers, ducks, pelicans, herons, and hornbills, there is an endless variety of devices and tools. There are running and walking legs, stilts, oars, paddles, spades, rakes, plows, game-bags, hammers, chisels, gimlets, hooks, knives, vises, pickaxes, and hatchets. By these means we have seen our feathered citizens scratching, jumping, wading, swimming, diving, boring, digging, cutting, sucking, and seizing—all to satisfy their hungry gizzards.

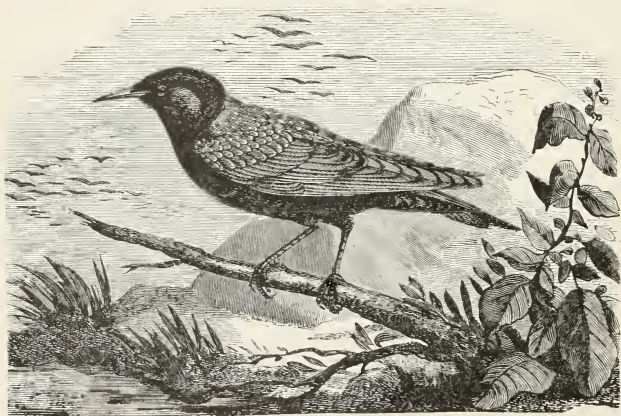
3. We are now beginning to enter a new sphere of feathered life. We leave the scratching and pecking, and go with our little friends to their great temple of song. Now we shall learn the value of the throat, and a new use of the beak. We shall hear the music of solo and chorus. We shall see that birds sing not only to call or charm their mates, but also to express their own joy.

4. And for us, too, they sing. Think of a summer without song-birds. As well have a summer without sunshine, without buds, or blossoms, or fruit. With no robin, no pewee, no bobolink, no mocker, no song-sparrow, June would be December. These birds are all lyre-birds and poets. They make the heart light and free. The burden

of joy or sadness floats away on their mirthful or plaintive music. Places change, but the birds are always the same.

“Ye banks and braes o’ bonnie Doon,
How can ye bloom sae fresh and fair ;
How can ye chant, ye little birds,
And I sae weary fu’ o’ care !
Thou ’lt break my heart, thou warbling bird,
That wantons thro’ the flowering thorn ;
Thou minds me o’ departed days,
Departed—never to return.”

5. The starlings are our happy songsters of spring. When the curtain of winter rises, they come in the midst of bursting buds and opening flowers. Among them are bobolinks, cow-birds,



The Starling.

meadow-larks, orioles, and blackbirds. Nature does not deny a shiny gloss, but she prefers dark colors for her musicians. The bobolink's dress is black and white. The cow-bird sings in lustrous black. The meadow-lark is happy in yellow, brown, and black. There are orioles of brown and black, and orioles of orange and black. Black-birds must be black, though they glimmer with blue and green; while some relieve their heads or wings with red, or yellow, or white.

6. The cow-bird lays small eggs, but shirks work and builds no nest. Into the nests of other and smaller birds she places her treasures—one egg in each. This egg is hatched sooner than its companions, and receives the first attention and love from the foster-mother. She becomes bewildered over her own weaklings, and tosses them from the nest and broods the little cow-bird alone.

7. The meadow or field lark, which is no lark, but a starling, we are told, loves the broad, sunny, shadeless meadow. She makes her nest in a tuft of grass, and jerks and flutters in the grass before she rises on her wings. The male sits upon a stump, or a fence, and sings a sweet, plaintive note which we can never forget.

8. Of orioles, the Baltimore is best known to us, bringing its name from the livery or arms of Lord Baltimore, of Maryland. Its note is a short,

simple, rolling one, not so much a song as a tune-ful way of talking. The oriole is called a hanging-



The Baltimore Oriole.

bird, on account of the peculiar nest it builds. On the south side of the tree, where the sun is brightest, and protected from the storm, it hangs a woven pouch or pocket from a limber twig, which rocks in the breeze but nev-

er breaks. Robber-birds find it difficult to plunder this nest.

9. The red-winged blackbird pipes a flute-like song, and chirps about the willows and bushes of the marsh or creek, where the nest is made, and two broods of young are raised. Black-birds do not live in pairs like other birds, but love rather to assemble in great flocks, covering the ground and the tree-tops. The crow-blackbird looks like his namesake, the crow, and

is a robber-bird, as bluebirds and robins sadly know.

10. But we come back to our bobolink. When the bright days of summer have passed, he puts on dull feathers, and becomes a glutton of rice-fields in the South. But he is the boy's bird. Washington Irving says of him: "Of all the birds of our groves and meadows, the bobolink was the envy of my boy-



The Bobolink.

hood. . . . It seemed as if the little varlet mocked at me as he flew by in full song, and sought to taunt me with his happier lot. Oh, how I envied him! No lessons, no task, no hateful school; nothing but holiday frolic, green fields, and fine weather."

THE BOBOLINKS.

1. When Nature had made all her birds,
With no more cares to think on,
She gave a rippling laugh, and out
There flew a bobolinkon.

2. She laughed again : out flew a mate ;
 A breeze of Eden bore them
 Across the fields of paradise,
 The sunrise reddening o'er them.
3. Incarnate sport and holiday,
 They flew and sang forever ;
 Their souls through June were all in time
 Their wings were weary never.
4. Their tribe, still drunk with air and light,
 And perfume of the meadow,
 Go reeling up and down the sky,
 In sunshine and in shadow.
5. One springs from out the dew-wet grass,
 Another follows after ;
 The morn is thrilling with their songs,
 And peals of fairy laughter.
6. From out the marshes and the brook,
 They set the tall reeds swinging ;
 And meet and frolic in the air,
 Half prattling and half singing.
7. When morning winds sweep meadow-lands
 In green and russet billows,
 And toss the lonely elm-tree's boughs,
 And silver all the willows :

8. I see you buffeting the breeze,
Or with its motion swaying;
Your notes half drowned against the wind,
Or down the current playing.
9. When far away o'er grassy flats,
Where the thick wood commences,
The white-sleeved mowers look like specks,
Beyond the zigzag fences.
10. And noon is hot, and barn-roofs gleam
White in the pale-blue distance;
I hear the saucy minstrels still,
In chattering persistence.

C. P. Cranch.

CHAPTER XXVII.

SOCIABLE TENANTS OF THE TREES.

1. THERE are some birds that love the society of human beings. They are mostly small, and it seems to please them to hover about and trust in beings higher and stronger than themselves. There is room enough for them in the forest or about broad fields, but they love the objects and company that gather about human homes—the orchard, the barn, the children, the cow, and the sheep.

2. The little, grayish-brown chipping-sparrow,

or chipbird, is most at home about the kitchen-door. In the near bush or shrub it builds a nest of grass, neatly lined with hair. Nearly every child, when it is old enough to talk about birds, is

told that he can catch one of these tempting creatures by putting salt on its tail. The small child usually tries his experiment on the chipping-sparrow, and usually fails.



Sparrows.

3. The white-throated sparrow is not quite so familiar, and is, therefore, a little farther removed from the danger of the child's ex-

periment. It is known by a black crown, by yellow spots over the eyes, by the orange edges of the wings, and by its white throat. It is also called the peabody-bird, because it is thought to sing something like *pea, pea-body, pea-body, pea-body*, in a tune of gentle sweetness.

4. The sparrow family is a numerous one. The cousins abound everywhere; but the song-sparrow is everybody's friend. Its crown is red with black stripes, and its breast is mottled; though its dress, always plain, varies its shades in different localities. Mr. Burroughs, the friend of birds, writes these pleasant words concerning this sociable family:

5. "The sparrows are all meek and lowly birds. They are of the grass, the fences, the low bushes, the weedy wayside-places. Theirs are the quaint and lullaby songs of childhood. The white-throat has a timid, tremulous strain, that issues from the low bushes, or from behind the fence where its cradle is hid. The song-sparrow modulates its simple ditty as softly as the lining of its own nest.

6. "What pretty nests, too, the sparrows build! Can anything be more exquisite than a sparrow's nest under a grassy or mossy bank? What care the bird has taken not to disturb one straw, or spear of grass, or thread of moss! You can not approach it and put your hand into it without violating the place more or less, and yet the little architect has wrought day after day and left no marks. There has been an excavation, and yet no grain of earth appears to have been moved.

7. "If the nest had slowly and silently grown,

like the grass and the moss, it could not have been more nicely adjusted to its place and surroundings. There is absolutely nothing to tell the eye it is there. Generally a few spears of dry grass fall down from the turf above and form a slight screen before it. Then, when the full complement of eggs is laid, what a sweet, pleasing little mystery the silent old bank holds."

8. There are sparrows of the summer and sparrows of the winter. Who does not know the brave little snow-birds that warm a driving snow-storm by their cheerful presence? But their home is not with us; they are only visiting. When the spring opens, they hie away to the far north, where they have a cool summer for song and for nesting.

9. Among our sparrow acquaintances is the English sparrow—the twittering, squeaking, little gamin of the city. He is always with us, fights away other birds, and is active and saucy. A good story about him was given to a newspaper: "A male bird brought to his box a large, fine goose-feather, which is a great find for a sparrow. After he had deposited his prize and chuckled over it, he went away to find his mate.

10. "His next-door neighbor, a female bird, seeing her chance, quickly slipped in and seized the feather—and here the wit of the bird came out, for, instead of carrying it into her own box, she

flew with it to a near tree and hid it in a fork of the branches, then went home, and was innocently employed about her own affairs, when her neighbor returned with his mate.

11. "The proud mate, finding his feather gone, came out of his box in a high state of excitement, and rushed into the cot of the female. Not finding his goods there, as he expected, he stormed around awhile, abusing everybody in general and his neighbor in particular, and then went away as if to get another feather. As soon as he was out of sight, the shrewd thief went and brought the feather home, and lined her own house with it."

12. These sparrows are all finches. The beak of the finch is short, stout, like a cone in form, and is suited to pick and crack seeds and nuts.

And there are, besides sparrows, other finches who rejoice in the friendly atmosphere of home. There is the goldfinch, or yellow-bird, known by its



Goldfinches.

black cap and wings, and by the wavy line of its flight. It is sometimes called the American canary.

13. Of the finch family the grossbeaks are members. The pine grossbeak, red and gray, lives in pine woods, and spends its summers far North. The cardinal grossbeak is red all over, wears a crest on its head, and makes its home in the Mid-



Grossbeaks.

dle States all the year round. His whistle is the merriest of all birds. The red and white winged crossbills are interesting, because the two parts of

their beaks run by each other like a pair of scissors, for the easier cutting and breaking of shucks and seeds.

14. The canary, for three hundred years bred in captivity as the musical house-pet, is a sparrow. "If the nightingale is the chantress of the wood, the canary is the musician of the chamber." It has a great power of imitation, and can be taught amusing tricks. Caged canaries have been known to live ten and even thirteen years. The most of them do not live half so long.

CHAPTER XXVIII.

OUR NEAR AND KINDLY NEIGHBORS.

1. THE poet says :

"Somewhat back from the village street
Stands the old-fashioned country-seat,"

and we may add that, from the top of the old mansion rises a chimney or stack of chimneys. In the nights of summer, through the open fire-places, the people who live in this home can hear strange flutterings and chirpings from the flues above, and once in a while a young bird or two, half-fledged and covered with soot, will fall into the fire-place.

2. If we watch about sunset, we shall see a great flock of birds collecting near the house-top. They are chattering and twittering, as though discussing some weighty matter. They are not still an instant, but take short flights, or hop on the roof, or from branch to branch upon the trees near by. But at last things seem to be settled to their minds. As the sun sinks out of sight, they form into line, circle round a little farther than usual, and then the leader flies directly down the chimney, the others following one by one until the whole flock disappears. These are the chimney-swallows.

3. Before chimneys were built, these birds made their nests in hollow trees, and often a single old tree would contain hundreds of nests. But owls kept watch above, and weasels invaded the tree from below, making sad havoc among the defenseless tenants of the trees.

4. When houses and chimneys were built, the birds soon discovered the tall hollow shafts, so like their old homes. Here they made nests in unused flues, and they soon found they were safe from their old enemies. The smoke, which was sometimes disagreeable, was a more tolerable companion than a weasel or a snake, and besides there was a warmth very agreeable on a cold night.

5. The news spread; and soon, whenever the

right kind of chimneys were built, the birds deserted their forest homes, and became companions to man : flitting above his roof, chirping for him a pleasant little chorus as an evening farewell, and gliding into his chimney to pass the night in silence, broken only by an occasional soft chirp, expressive of contentment and security.



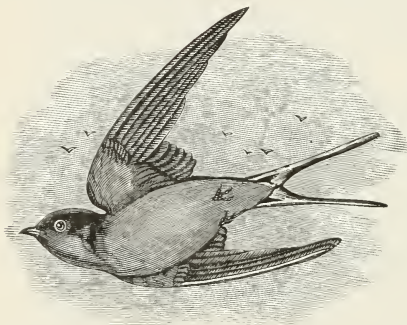
The Esculent Swallow's Nest.

6. The chimney-swallow is not a true swallow but belongs to the swifts, a family of birds re-

sembling the swallows in form and habits. In the structure of their throats, however, they are more akin to the humming-birds.

7. The tail of the chimney-swallow is square across the end, and each tail-feather ends in a stiff, naked spine. When building its nest, this bird clings to the wall by its toes and these tail-spines, using its bill to arrange the twigs of which the nest is made. The twigs are cemented by a kind of glue which the bird ejects from its stomach. In Java and adjacent islands the gluey substance used by a bird of this kind forms the edible birds'

ests, greatly valued as an article of food in China.



The Barn-Swallow.

8. THE BARN-SWALLOW.—Back of the old mansion is a group of old barns; and here we find the true swallows,

with their forked tails and swift, zigzag flight. The barn-swallow builds its nest of mud upon the rafters under the peak of the roof. That it might go in and out, the carpenter made the three-

cornered "swallows' holes" high up in the gables.

9. THE CLIFF OR EAVES SWALLOW formerly built its nest upon the sides of cliffs, where a projecting stone afforded some shelter from above. But since man has come, these swallows have found that the eaves of barns furnish the shelter they need; and here they build their nests of mud, lined with fine grass and feathers.

10. THE BANK-SWALLOW, also known as the "sand-martin," seeks high, perpendicular banks of clay for its home. Here, in the middle of the bank, so as to be out of reach of enemies from above or below, it digs deep holes in the clay, and at the farther end makes its nest. Railroad-cuts often furnish the proper kind of bank for its nest-digging, and the bank-swallow becomes more numerous as such cuttings are made.

11. MARTINS.—The purple martin is the largest of the swallow family. It is strong, and swift of flight, and it shows great courage in defending its nest and in attacking any birds or animals that have a taste for eggs or young birds. A pair of these birds will drive a cat out of the garden and a hawk out of the district. The martin is a great favorite with people in the country, and "martin-boxes" are placed on trees and poles for them to build nests in.

12. All the swallows catch their prey upon the wing, and they destroy immense numbers of insects which would otherwise spoil our crops. In the spring they come early, sending on an advance-guard to see that everything is ready before the whole body arrives. It was once thought that they passed the winter in the mud at the bottom of ponds; but it is now known that they migrate in early autumn to warm southern countries, and that vast flocks of them collect and fly mostly by night.



CHAPTER XXIX.

FRIENDS OF FIELD AND FOREST.

“Hark, hark, the lark at heaven’s gate sings.”

1. THE lark of Shakespeare, the sky-lark, lives in the land of Shakespeare. Our little goldfinch sings his galloping ditty while he bounds along the air; but most of our song-birds must fold the wing and rest the foot when they swell the throat. This modest brown sky-lark, that builds its nest in the grass, rises in the air and pours down a shower of notes upon the world beneath. Even when it has soared beyond the reach of the eye, its music still reaches and charms the ear.

2. So the poets have loved to extol the sky-lark, as Longfellow sings :

“Up soared the lark into the air,
A shaft of song, a wingèd prayer,
As if a soul, released from pain,
Were flying back to heaven again.”

3. Our larks, by the structure of their bills, nostrils, and wings, are closely related to the European sky-lark. The so-called meadow-lark does not belong to this family ; but the shore-lark, the titlark, and the wagtail are familiar members, and sweet singers. The shore-lark has over



The Sky-Lark.

each ear a peculiar tuft, which gives it the name of horned lark. The wagtails have a singular way of wagging their tails, as if trying to balance themselves when they alight. They are restless creatures, tripping from one place to another, always with a wag or twitch of the tail. The Louisiana

pipit, or brown lark, is common, though its song is feeble.

4. The Missouri titlark is our sky-lark ; but it seems to be waiting for some poet to excite human



The American Titlark.

ears to hear it. From the Red River of the North to Texas in the South it cleaves the sky with its soaring song. "Rising from the nest, or from its grassy bed, this plain-looking bird, clad in the simplest

colors, and making but a speck in the boundless expanse, mounts straight up, on tremulous wings, till lost to view in the blue ether, and then sends back to earth a song of gladness that seems to come from the sky itself, to cheer the weary, and give hope to the disheartened.

5. "No other bird-music in our land compares with the wonderful strains of this songster ; there is something not of earth in the melody, coming from above, yet from no visible source. The notes are indescribable ; but once heard, they can never

be forgotten. Their volume and penetration are truly wonderful ; they are neither loud nor strong, yet the whole air seems filled with the tender strains, and delightful melody continues long unbroken. The song is only heard for a period in the summer, and it is only uttered when the birds are soaring."

6. Of warblers there is a multitude, though there must be practiced eyes and keen ears to see and hear them. They are small: only five inches long. Their colors are rather gay—too gay for distinguished musicians. They mingle the tints of blue and black, yellow, green, and white, in great variety. The black and white creeper, the blue golden-winged warbler, the blue yellow-backed warbler, and the summer yellow-bird, are common acquaintances. They pry into every crevice of limb or bark, and catch their daintiest tid-bits on the under side of leaves, where other birds forget to look. They nest on the ground, in stumps, bushes, or trees.

7. Our summer yellow-bird, the blue-eyed yellow warbler, has a sprightly song, and is a common inhabitant of woodland. The nest of this bird is one of those in which the cow-bird lays her egg. In making her nest, the yellow-bird, when arranging the material, which is cotton or wool, whirls round and round, with outstretched wings and tail, like a small spinning-wheel.

8. In this expert nest-builder, the cow-bird finds her match. If this sly impostor deposits her egg in the nest, either before or after the yellow-bird has laid her own eggs, this shrewd little builder sets to work and places a new floor, covering both her own eggs and that of the cow-bird. Then she begins another brood.

9. While we attend to warblers, we must not forget the wonderful, sober, quiet, little tailor-birds, who live in India, where they have lively and reckless monkeys to deal with. Their nest is a marvel of crafty work. Away out at the end of a slender twig, where spry monkeys can not reach, these little tailors—seamster and seamstress—join hanging leaves and sew them together, with some vegetable fiber for thread. The holes in the leaves are punched and the thread is drawn through by their bills; then the whole is glued together with their saliva. Cotton, lint, and down furnish the nest within.



Nest of the Tailor-Bird.

10. Occasionally there comes dashing into the

trees, where the plainer home birds play, a visitor so gay that it might be taken for a tropical bird. It is about the size of a swallow, and is of a deep-scarlet color, except its wings and tail, which are as deeply black. In the more Western States, this bird is rose or vermilion in color, wings and all.

11. "Oh, see that beautiful red bird," is the exclamation, when this unexpected visitor arrives, and everybody tries to get a sight at it. The one with black wings is the scarlet tanager, and the other, of solid color, is its cousin, the summer red-bird. We may reasonably wonder why they do not show their rich robes to us oftener. But the gay robes are quite likely to be the reason. Among birds, to be beautiful is to be seen, to be caught, and shot at, and to be always in danger. The safest are they which sit upon tree-tops and are heard, not seen.

12. When cherries are ripe, the cedar-bird comes. It is the Carolina wax-wing. Its feathers wear a glossy, olive-ash color, and a crest rises from its head. There is a singular horny point on its wings that looks like sealing-wax. The fondness it has for the ripest and best cherries wins for it few, friends.

13. There are two small birds we shall observe if we look carefully, who are clad in olive-green, like the leaves among which they twitter and



The Wax-Wing.

dance. They love the sunshine. One of them has red eyes, and the other has white eyes. They are



The Red-eyed Vireo.

the red-eyed and white-eyed vireos. Red-eye plays a quaint little tune, and white-eye sings a simple, quiet ditty. Their soft, sweet notes fill us with peaceful feelings, as of some distant spirit voice.

14. The nest of the white-eyed vireo is something curious. It

hangs from a bush like an inverted cone, and is made of twigs and hornets' nests, and nearly always of bits of newspaper. Hence, the bird is called "the little politician." In this nest the cow-bird places her egg, and obliges the little vireo to hatch and rear a young one several times as big as herself.

15. It is not so pleasant to pass from the gentle vireo, patient under the imposition of the cow-bird, to so fierce a character as the great northern shrike, or butcher-bird. The garment that covers this hard-hearted creature is of rich slate or ash color, trimmed with velvety black on the wings and tail. It is larger than the blue jay, and its beak is devoted not so much to song as to the slaughter of smaller birds. And when this butcher-bird has killed his victim, he hangs it on a thorn or twig, and straightway goes to kill another.

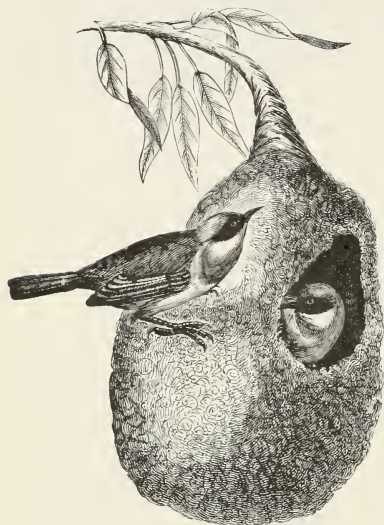
CHAPTER XXX.

LITTLE BUSY-WINGS.

1. THE titmouse, which is our chickadee, ought to be one of our best friends; for, with the snow-bird, it comes to give lightness to the dull tone of winter. Titmice are quite suggestive of mice in

feathers. The chickadee has a black crown, and the tufted titmouse wears a crest; but otherwise they have a color not unlike that of mice, and in their sly, quick, droll actions, they remind us of their cousins in fur.

2. Titmice hop, skip, and jump about from twig to twig, looking over and under branches and



The Hanging Titmouse.

leaves, and into all cracks and holes for their insect food, revealing their presence by their "saucy note." They ought to have the friendship of all those who value the fruit of garden or orchard for the earnest, patient work they do in catching harmful insects.

3. Their nests are curious. On

the Pacific coast is a titmouse, called the least-bush-tit, who constructs a nest like a skillfully-woven purse, hung from a slender branch. The

Cape titmouse, in South Africa, weaves a nest of cotton, in the shape of a bottle, which is suspended from the twig of a tree. It has an outside pocket, in which the male sits as watchman while the female and her brood are within. When the mother leaves her charge, this watchman closes the entrance of the bottle by beating it with his wings.

4. A lively, nimble, little creeper, shying around a winter tree, clinging to the bark like a woodpecker, and uttering his *quauk, quauk, quauk*, is the nut-hatch. It is so called because it sticks nuts and seeds in the bark of trees, and then hammers them till they are cracked. Its upper feathers are blue, its under feathers white, and its crown is black.

5. Nut-hatches are like the titmouse in their habits—turning and twisting around the branches, in quest of insects with which to vary their diet of nuts and seeds. To make the search more easy, their tongues are horny, and end in sharp points or barbs. It is not altogether easy for them to crack some of the nuts they eat. If a hazel-nut, which is hard, is to be opened, they place it in a crevice in the bark, and, after striking it in several different positions, finally hammer it with their heads down.

6. These active little winter neighbors, like the titmouse, remain with us throughout the year; but

we see little of them during the summer, for they are then busy with their nests and young, which they tuck away in the holes of trees. While the female is confined to her duties within, the male may be seen creeping about the hole and softly chattering to make light the tedious moments of her imprisonment.

7. Speaking of our small neighbors, we can not pass by the story of the wren. It is a gallant little soldier, and an accomplished artist. An ancient story calls it the king of birds. Its claim to royalty seems to rest upon the fact that it is both small and smart. The old story tells how the birds assembled to choose a king, and it was decided that he should be king who could soar the highest.

8. All the birds sprang up into the air; but the eagle, as might be expected, mounted higher toward the sky than the rest, and proclaimed himself king. But the little wren, so small and light that he was not noticed, was all this time riding on the eagle's shoulder: and, as soon as this proud monarch had reached his limit, up sprang the wren on its tiny wings and rose still higher.

9. Great size and strength are not always the best means of defense, as is shown in the case of this very small but active bird. The nest of the marsh-wren is an ingenious little pocket fastened

to the stalk of a rush or mallow. It is too high for a large robber in feathers to reach, and a smaller enemy finds no branch to stand upon. But the smart and nimble wrens can cling even to the smooth stalk, and laugh at all enemies.

10. The house-wren, or "Jenny Wren," is a human little creature, that has become a favorite about home by its gushing melody and its pert ways. First of all, it is a brave fighter, and will attack a martin or a cat. It will perform a small manual of arms, with its jerking body and its bobbing head and tail. When a house-sparrow has committed a criminal act, Jenny Wren has called in her associates and given him a sound drubbing.

11. Then our brave little friend is a skilled artist. The female does the work in building, while her mate, who does no work, plays a continuous song. To the one it seems pleasant to be charmed with fine music, while hard at work, and to the other it seems much easier to sing than to work. Both parties are satisfied, and the nest is a dainty little piece of architecture, upon which a vast amount of labor has been bestowed.

12. A great deal of common sense is shown by this cunning builder. She prefers a box, with a very small hole, to place her nest in; but if this is wanting, she will make the best of any hole or cranny. She has erected a choice little home in

the carcass of a hawk nailed to a barn, in the skeleton head of a calf suspended in a tree, in the sleeve of a neglected coat hung in a stable, and in an old hat.

13. Some persons have watched to find out how many times in the day a pair of birds feed their young. The wren has been seen to bring food to her six little ones two hundred and seventy-eight times during a single day. How much mischief the caterpillars, worms, and other insects thus slaughtered could do, it is not easy to estimate. This should make Jenny Wren a universal favorite



CHAPTER XXXI.

BIRDS AT DAWN.

1. THE beautiful day is breaking,
 The first faint line of light
 Parts the shadows of the night,
And a thousand birds are waking.
I hear the hairbird's slender trill—
So fine and perfect it doth fill
The whole sweet silence with its thrill.
2. A rosy flush creeps up the sky,
 The birds begin their symphony.

I hear the clear, triumphant voice
Of the robin, bidding the world rejoice.
The vireos catch the theme of the song,
And the Baltimore oriole bears it along,
While from sparrow, and thrush, and wood-pewee,
And, deep in the pine-trees, the chickadee,
There's an under-current of harmony.

- 3 The linnet sings like a magic flute ;
The lark and bluebird touch the lute ;
The starling pipes to the shining morn,
With the vibrant note of the joyous horn ;
The splendid jay
Is the trumpeter gay ;
The kingfisher, sounding his rattle—he
May the player on the cymbals be ;
The cock, saluting the sun's first ray,
Is the bugler sounding a reveille ;
“Caw! Caw!” cries the crow, and his grating tone
Completes the chord like a deep trombone.
4. But, above them all, the robin sings ;
His song is the very soul of day,
And all black shadows troop away
While, pure and fresh, his music rings :
“Light is here !
Never fear !
Day is near !
My dear !”

Harriet E. Paine.

CHAPTER XXXII.

SONG AND HYMN OF GARDEN AND WOOD.

“ I hear from many a little throat
A warble, interrupted long ;
I hear the robin’s flute-like note,
The bluebird’s slenderer song.

“ Brown meadows and the russet hill,
Not yet the haunt of grazing herds,
And thickets by the glimmering rill,
Are all alive with birds.”

1. OUR “flying visit” brings us at length to the birds of richest, rarest song. The migratory thrush, or robin-redbreast, claims for its home the North and the South, the East and the West, is everybody’s friend, and everybody should be its friend. It loves worms, but it also loves men.

2. We can hardly tell what our robin did before he had an apple-tree to build his nest in ; or a cherry-tree to be king of ; or a garden to pick worms from ; or a lilac-bush to light on while he chats his *tuck, tuck, tuck* ; or a kitchen-window to peep into ; or a human neighborhood to flute his morning song to. Nor can we know whether the chimney-swift or the swallow felt lost before there were chimneys and barns for them.

3. The blackbird of England is our robin in a

darker dress. The song-thrush of the same country is remarkable for its rich, mellow tone, and for the delicacy of its flesh. But the nightingale of the old country is her queen of song. With its music Milton celebrates the marriage of our first parents :

—“Nor then the solemn nightingale
Ceased warbling, but all night tuned her soft lays.”

And the ancient Pliny says: “In that little bill seems to reside all the melody which man has vainly labored to bring from a variety of musical instruments.”

4. Good old Izaak Walton gives us this: “The nightingale, another of my airy creatures, breathes such sweet music out of her little instrumental throat, that it



The Song-Thrush.

might make mankind to think that miracles had not ceased. He that at midnight, when the weary laborer sleeps securely, should hear, as I have very often heard, the clear airs, the sweet descants, the natural rising and falling, the doubling and redoubling of her voice, might well be lifted above

earth, and say, 'Lord, what music hast thou provided for the saints in heaven, when thou affordest bad men such music on earth?'"

5. Our earliest harbinger of spring, and the familiar acquaintance of everybody, is the bluebird—

"The bluebird shifting his light load of song
From post to post along the cheerless fence."

He answers to the English robin. He comes from the warm South, and we often hear his gentle, roll-



The Nightingale.

ing carol before we have realized that spring is near. "With the earth-tinge on his breast, and the sky-tinge on his back," the cheerfulness of opening buds is in his pleasant voice.

6. Soon after the bluebird announces his arrival, comes his more plainly dressed mate. Their family home is in hollow stumps, knot-holes, or boxes. When a nest is so far down in a perpen-

dicular hole that the young can not climb out, it has been found that the parents let down sticks for a ladder. These birds stay with us longer than other migratory songsters, are not afraid of men, meet us everywhere, and are among our most familiar friends.

7. Appearing in the Middle States during the latter part of April, there is the brown thrasher, the largest of our thrushes. His bright reddish-brown back, broad fan-tail, and vigorous flight among brambles and bushes, are all familiar points. His nest is usually placed so near to the ground that it invites unfriendly visits from black-snakes, which the bird vigorously repels. The thrasher is a delightful songster, though not a mocking-bird, as many suppose. He has a note of his own.

8. Out from thickets and orchards comes a cry as of a motherless kitten, and the coming of the cat-bird is announced. Not very attractive in his covering of deep-slate color, he is a mocker, but imperfect



The Brown Thrasher.

and not distinct in his imitations. The cat-bird always joins in the daybreak chorus. Of his strong paternal attachment, Wilson says:

9. "In passing through the woods in summer, I have sometimes amused myself with imitating the violent chirping or squeaking of young birds, in order to observe what different species were around me; for such sounds, at such a season, in the woods, are no less alarming to the feathered tenants of the bushes, than the cry of fire or murder in the streets is to the inhabitants of a large and populous city.

10. "On such occasions, the cat-bird is the first to make his appearance, not singly, but sometimes half a dozen at a time. At this time, those who are disposed to play with his feelings may almost throw him into fits at the distressful cries of what he supposes to be his suffering young."

11. "But hush!

Far off sings the sweet wood-thrush."

From the topmost branch of some tall tree, far off, and yet near enough for music-loving ears to hear, or out of the still depths of the forest, he pours his melody on the air like the rolling, double-tongued notes of a finely played flute. He sings in the sunshine, and when the day is fading into night. He sings when it is dry and when it

is wet. Even when the throats of other birds are closed, the wood-thrush sings.

12. A near relative of this bird is the linnet-thrush, less attractive in feather, seldom heard, but



The Wood-Thrush.

said to possess even a richer note. Of the wood-thrush Mr. Burroughs says: "He is a poet in very word and deed. His carriage is music to the eye. His performance of the commonest act, as catching a beetle, or picking a worm from the mud, pleases like a stroke of wit or eloquence. What a finely

proportioned form! How plain, yet rich, his color, the bright russet of his back, the clear white of his breast!"

13. The mocking-bird, our most renowned thrush, is the American nightingale. Ashen-gray, with tail and wings black and tipped with white, it rarely passes the summer north of the thirty-eighth parallel of latitude. It brings off two broods in the season, hates the cat, and is a deadly enemy to the black-snake. It is the rival of the English nightingale, both as a singer of the night, and in the richness and power of its song.

14. In the cage, the mocking-bird is a faithful learner and imitator of other birds' notes. But in its wild freedom at the South it makes its best performance. When the last trill of the whip-poor-will has died away, our night-minstrel floods the moonlit air with enchanting melody. He even mounts into the upper air, and, while soaring on his wing, shakes out the notes of his delicious song upon the world below—thus proving himself both sky-lark and nightingale.

CHAPTER XXXIII.

THE ROCHESTER ROBIN.*

1. A ROCHESTER robin alighted one day
On a bar or a brace of the wonderful thing
That mills the swift miles like grain in its way,
And flies like a bird, though it never takes wing.
2. And the Rochester robin said to herself,
"What a place for a nest, so strong and so warm,
As neat as a pin and as shiny as delf,
Up out of the danger, in out of the storm."
3. And her mate by the roadside struck up the old
lay,
He sang for the apple-tree blossoms to dance,
The girlish white blossoms in pink *appliqué*,
More fragrant and fair than the lilies of France.
4. The heart of the engine was cold as a cave,
The furnace-door grim as the grate of a cell;
And, dumb as the church under Switzerland's wave,
Like a tulip of gold the glittering bell.
5. Then the stoker swung wide the furnace's door,
Stirred up the dull fire, and the robins just said,

* A Rochester robin has built its nest on the main frame of an engine of the New York Central Railroad. The engine runs daily between Rochester and De Witt, but the bird occupies the nest.

“Summer weather to-day !” Then rumble and roar
 Played the water’s hot pulse with the clouds
 overhead.

6. “I am sure it will rain,” he sang to his mate,
 “It thunders and lightens ; but work right along,
 The house but half done, and the season so late—
 How cloudy it grows.” So he kept up the song.

7. And the twain fell to work, bore timbers of
 straw,
 And fibers of wool caught on thistle and thorn ;
 And wrought them all in, by the Lord’s “higher
 law,”

With threads of the laces some maiden had worn.

8. Then *clang* swung the bell, and the warble was
 hushed,

And the crazy sparks flew, as if the storm tore
 The small constellations aside and asunder ;
 While the engine along the steel parallels rushed.
 The birds watched it all with innocent wonder—

“Who ever saw stars in the day-time before ?”

9. Then she cried, and he said, “The gale is so
 strong,
 I think the whole world must be blowing
 away !”

She, trusting, replied, “Can not last very long,”
 And kept on with her work, far sweeter than play.

10. To and fro, far and near, their fiery world went,
The cup of their love brimming over with life;
And the engineer stood at his window, intent,
And watched the steel rails, the redbreast and
wife,
And declared, by his engine and honor, he would
Be the death of the man, big or little, who should,
In the height or the depth of his gracelessness, dare
"To meddle or make " with his passengers there.

11. Ah, brave guests of the foot-board, ticketed
through
All weathers and times till the end of the run,
The Lord of the sparrows, who is caring for you,
And the Lord of all realms forever are One.

Benj. F. Taylor.

CHAPTER XXXIV.

WINGS AND FEET FOR EARTH, AIR, AND SEA.

1. BEFORE parting from our friends in feathers, let us invite them all to gather in some pleasant field in the world of our imagination, that they may see and amuse each other, and that we may be both amused and instructed. So many sizes, shapes, and colors could scarcely be brought from any other race of animals. Many of them have

never met before, and they have their emotions excited as they examine the different forms, features, and feathers assembled.

2. We can easily fancy the flamingo, with long legs, wings, and neck, and the penguin, with short legs, and stubby wings, expressing surprise at each other. The pelican, with dignified face, and the bird-of-paradise, with gorgeous dress, will admire each other. The owl, who can not see well, but has ears to hear, will enjoy the guffaw of the laughing-jackass; and this visitor from Australia will be excited to smile more loudly than usual at the big ears of the owl. The secretary-bird will, doubtless, be pleased with the snaky neck of the darter. The condor will



Sharp Claws of Bird of Prey.

study with interest the instruments of slaughter carried by the eagle, hawk, and falcon; and those hungry highwaymen will find it hard to keep their cruel claws from the multitude of dainty little hoppers before them.

3. Then we may fancy some of the visitors claiming relationship by their feathers, bills, legs, and feet. The flamingo will show that he is kin both to the heron and the duck. The pigeon, by its feet, will cousin with the hen, and, by its wings,

with the swiftest fliers. The penguin, because he uses his little wings for crawling and swimming, may show his relationship to lizards and fish. The darter, by his neck, may claim that his forefathers were snakes. All the members of the assembly will rejoice in the common features they behold, and the mass-meeting will be turned into a family-gathering.

4. The ostrich—the feathered camel—will be the grand patriarch of the occasion, and we may well conclude that he will be honored. He will not be annoyed or burdened if the whole race of perchers—finches, warblers, swallows, and wrens—sit upon his back, and nut-hatches and woodpeckers climb his neck and legs. If now, in the midst of this general good feeling, the whole assembly should join in the exercise of their musical powers, there would be such a chorus as was never before heard. The tide of music would swell with the songs of nightingale, skylark, bobolink, robin, wood-thrush, and mocker; with the crowing of the cock, the cackling of the guinea, the hoot of the owl, the honk of the goose, the caw of the crow, the yell of the loon, the horn of the crane, the quack of the duck, the screech of the parrot, the trumpet of the heron, the cymbal of the woodpecker, and the drum of the grouse.

5. Amid the vast variety in this feathered con-

vention, one fact is common to all its members they are all birds. All breathe air and are warm-blooded ; lay eggs, have backbones and feathers ; two limbs for walking or swimming, three eyelids, bony tongues, and hollow bones. None of them have true teeth, or lips of flesh, or outside ears.

6. If now they scatter, and go to their homes as fast as they are able, we have a fine chance to observe their different natural motions. It is easy to see that they divide themselves into birds of the air, birds of the land, and birds of the water. To secure the objects of their life, all must move, and all have either air or water to move in or against. Hence, the general shape of the body is alike in all. It has the form of the egg they lay. The breast of the bird is like the large end of the egg, and the rest of the body tapers back like the small end. Or the form of the bird's body is like a boat or canoe, tapering at both ends, so as to cut the air or water in front, and to drag as little as possible behind.

7. The breastbone of the bird is like the keel of a boat, and the curve is shorter in water than in land birds. Water-birds, too, have flatter bodies for floating, while they, as well as air-birds, have air-cells which, with their hollow bones, are filled by their lungs. The ostrich, and the apteryx, of

New Zealand, that has no wings or tail, both have flat breasts.

8. Just as the balloon, the buggy, and the boat are operated, each in a different manner, so the birds of the air, of the land, and of the water have different means of motion. The air-birds are moved by the wings pressing against the air. For powerful flight over a short distance the wing is short and round, and makes rapid strokes, as in the quail or grouse. For the light, airy, circling, or continued flight of the swallow, the pigeon, or the albatross, the wing is long and pointed. The wings of the ostrich and auk are stubby, because they do not use them for flying.

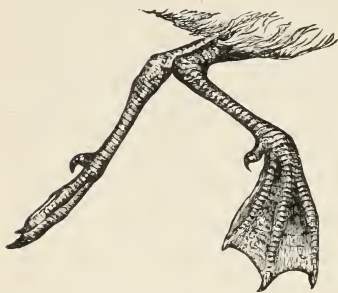
9. The land-birds are moved mainly by legs. The turkey, pheasant, lyre-bird, and all walkers and runners, are well-balanced on long, strong legs; the waders' legs are still longer. For the swimming-birds these limbs are short as well as strong, and they are set far behind, so as to push the body in the water. The birds of the air, except those that use their feet for catching prey, have short, weak legs, and they move when on the ground only by hopping. The duck and penguin are awkward walkers.



*Strong flat Foot of
Scratcher.*

10. All birds have necks long enough to carry

the bill back to the oil-sac at the root of the tail. And, when the legs lift the body high above the



Swan swimming, showing the Web expanded and closed.

ground, the neck must be long enough to bring the bill back to the ground. So, the crane, stork, and heron have long necks; and ducks, swallows, and cormorants have short necks.

11. The feathers, also, are precisely suited to the habits of the different birds. All need feathers for a covering, as other animals need fur and scales. The duck has a thick, oily coat to resist water. The fliers have fewer feathers, light and open, except in the wing, where the barbs of the feathers are hooked and locked together, so as to resist the air. The feathers of the ostrich are downy, so as to cover him, and at the same time make his load light when he runs. The tails of flying-birds are used for rudders to steer their course.

12. The foot of the bird is that part of the leg that reaches from the joint we see below the feathers to the ground. This joint is the heel, and some birds, like the auk, when sitting, rest

upon the whole foot. Most birds have four toes, three in front and one behind. The feet, including the toes, differ according to the work they have to do—whether they perch, or walk, or wade, or swim.

13. The higher up a bird lives, the shorter are its feet, and the longer are its toes. The perchers must grasp branches and twigs, and they have long, slender toes, with sharp nails, the hind toe as long as the front ones. Some of them have their toes in pairs—two before and two behind—an arrangement quite convenient for the woodpecker, who wants to cling to a tree with his head down; and for the parrot, who climbs from twig to twig like a monkey.



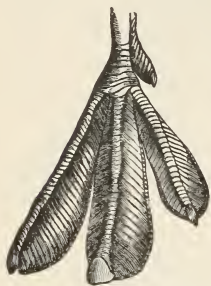
Climbing-Claw of the Parrot.



Walking-Foot of the Plover.

14. The walkers and scratchers, like the hen and turkey, have toes that spread when they touch the ground, so as to make a broad foundation to support their bodies. The hind toe is set up, and above this is sometimes seen the spur for defense. The plover has but three toes, as it is a beach-walker, and not a scratcher. The flamingo wades in deep water, and its three fully webbed toes serve to keep it from sinking in the mud, as it

digs and bores for its prey. The heron has but two webbed toes; he stands and waits for his prey to come to him. The grebe has a membrane on each side of its toes, which makes them paddles when it needs to swim. In some this membrane is scalloped.



*Foot of Grebe, showing
Swimming-Membrane
on each Toe.*

15. Among swimmers, the duck, like the swan, a complete water-bird, has three webbed toes. The pelican, with long wings for flight, needs a powerful oar when he swims, and his toes are all webbed. The ocean-fliers can not be bothered with great, strong legs and feet: so their limbs are small and weak; and, to help them, when it is necessary to swim, they have webbed toes. The birds that seize their prey alive, like the hawk and eagle, have all their toes long, curved, strong, and with sharp claws; while the vultures, that only attack animals when they are dead, wear short hind toes, long, nearly flat front toes, and all rather weak.



*Curved Toes of the Grebe or
Coot.*

16. Nothing about birds is more curious than

the bill. Of course, it is the mouth, but it is also the lips, and partly the teeth. It does all sorts of work, for it is a hand as well as a mouth. It tears, cuts, crushes, pounds, feels, holds, carries, and performs the work of a variety of tools. To do all this, it is either long or short, straight or curved, or hooked; and it is slender or cone-shaped, or flat and wide. The air-birds, or perchers, if, like the robin, they live largely on insects, have bills of medium length; but if they are seed-eaters, they have short, cone-shaped beaks, like the finches, or cracking and cutting bills, that work like scissors, as in the cross-bill. Those that catch insects on the wing, like the night-hawk and swallows, have short bills that open wide and deep.

17. The parrot has a nut-cracking bill with a hook at the end for climbing. The eagle's bill is both hooked and strong, for catching and tearing live animals; while the vulture's bill is weak and less hooked, as it is used merely to carve dead flesh. The heron manages well, with a long, sharp, cutting bill, to snap a fish as it swims by; but the flamingo, to bore, and plow, and sift, needs the large, ugly tool that he has. The spoon-bill catches shrimps and crabs with a double spoon; the duck digs and strains out its nourishment with a double shovel; the pelican captures

small fry with a scoop; and the sea-fliers have long bills, with sharp or hooked ends, so arranged as to catch and hold their slippery prey.



CHAPTER XXXV.

SHINY TENANTS OF BROOK AND POND.

1. FISHES are our friends, mostly because they allow us to catch and eat them. Some of them, like the gold-fish and other small varieties, live well in the aquarium, and grow interesting as pets. Those that are kept in large numbers in artificial ponds grow tame, and will come at the call of the voice, or at the tinkling of a bell. Fish have sense enough to know where to find their nests. They return to the sea after they have journeyed far up toward the source of rivers. But their wit fails against the deception of a baited hook hiding within a tempting bait

2. There are some features of rare beauty about fish. Among them are those whose form is graceful, and some are clothed in scales that reflect nearly all the colors of the rainbow. But the most interesting thing about fish, to the majority of the people, is the catching of them with

rod, hook, and line. The rod and line, as held in fishing, describe in the air the two sides of an angle, and hence fishing has been called angling. From earliest times it has been considered fine sport to go fishing. More than two hundred years ago Izaak Walton, an Englishman, wrote a book on angling, which is even now a delight both to those who love books, and to those who love this charming sport. In this book, addressing one who is learning the art of angling, he says :

3. "No life, my honest scholar, no life so happy and so pleasant as the life of a well-governed angler ; for when the lawyer is swallowed up with business—and the statesman is preventing or contriving plots—then we may sit on cowslip banks, hear the birds sing, and possess ourselves in as much quietness as these silent, silver streams which we now see glide so quietly by us. Indeed, my good scholar, we may say of angling, as Dr. Boteler said of strawberries : 'Doubtless God could have made a better berry, but doubtless God never did.' And, so, if I might be judge, God never did make a more calm, quiet, innocent recreation than angling."

4. With this sentiment most girls and boys will agree. But another view set forth by Izaak Walton hardly represents the facts :

“Of recreation there is none
So free as fishing is alone;
All other pastimes do no less
Than mind and body, both possess ;
My hand alone my work can do,
So I can fish and study too.”

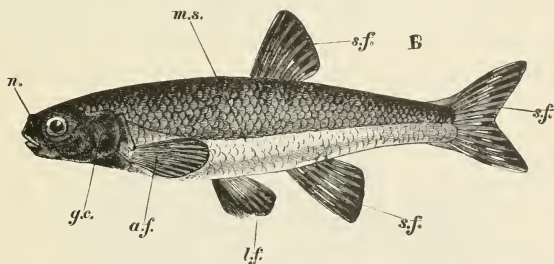
Where is the boy that can study while he is baiting his hook, casting his line, or landing a wriggling shiner or chub? Fishing forgets everything but itself; forgets school, study, and the time of day; forgets that water is wet, or cold, or deep. But it is sometimes forcibly reminded of all these things by a small edition of the Judgment-day, when it returns home at night.

5. There is one kind of study, however, that may go along with fishing, and that is the study of fish. Here is the shiner, nearly always the first inhabitant of the water to be introduced to a young fisherman at the end of his quivering line. What a graceful form it has, tapering into a small head at one end, and thin lively tail at the other. And how true to its name, as its greenish back, and sides of lustrous, silvery white, gleam in the sunshine.

6. Let us go to school to the shiner, and see what we can learn. Along the bank of a brook, when the water is clear, we will step softly, and on the side that is away from the sun, so that our

shadows will not fall on the stream. Here, in little pools, are scores of minnows. They are a kind of fish by themselves, and never grow longer than two or three inches. But here again is a deeper pool, over part of which the bank casts its shadow. Keep still now, for a moment. There he comes ! Now watch him closely.

7. He stops to look and to hear if any danger is near. It is easy to see how he keeps from roll-



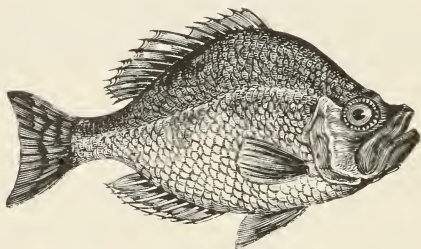
The Common Minnow : n, nose ; gc, gill-cover ; af, arm-fin ; lf, leg-fins ; sf, single fins ; ms, mucous scales.

ing over. There are two limbs just behind the head, and two more still farther back. These limbs are fins, but they have fingers and toes which are like the rays of a fan. The shiner spreads out these fins on either side of him, and they keep him in an upright position. There is another fin sticking up on his back, and still another below, near his tail. These help to hold him steady.

8. It is easy to see how the shiner keeps right

side up, but not so easy to see how he floats or keeps himself from sinking. Watch him! He moves a little! This is a simple operation. He vibrates his tail horizontally, just as a boat is sculled by working a single oar at the stern. But how he manages to stand still, and to rise or drop in the water is not so clear. To learn this secret of the shiner, we must catch him.

9. Most young fishermen study the habits of fish but little. They readily learn to distinguish the varieties. They know the roach, by the red in



The Rock-Bass.

its eyes and about its lower parts; and the chub, by its large neck and head, coarse scales and flesh. They know the perch, by its yellow color and small head, and because it is a "bold biter," as Walton says; the rock-bass, by its broader body and pouting under lip; the sun-fish, or pumpkin-seed, because it is nearly round. And these fishes

have made more or less impression on all young anglers by the sharp, ugly spines with which their fins are armed.

10. Everybody, too, knows the sucker, by his peculiar mouth; and the bull-head, because his head is the largest part of him, and carries ten spines with which to draw blood from tender hands. These peculiar marks are soon learned, but who notes the resemblances or difference of fishes, or sees that the chub, and roach, and shiner, and sucker have soft fins, and the perch and bass have sharp, stiff fins? Or who knows how these fishes stand still in the water?

11. But we must catch our shiner before he gets away. Izaak Walton gives to young fishermen some hints that it may be well for them to learn. He tells them that the earth-worms they use for bait should be taken from the ground long enough to become empty and hungry before they are used. The hook should enter near the tail of the worm, so as to leave the head covering the end or barb of the hook. And further he says: "Before you begin to angle, cast to have the wind on your back; and the sun, if it shines, to be before you; and to fish down stream; and to carry the top of your rod downward, by which means the shadow of yourself, and rod too, will be least offensive to the fish, for the sight of any body

amazes the fish, and spoils your sport, of which you must take great care."

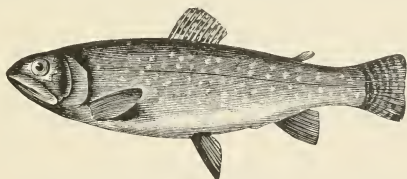
12. We shall have no difficulty in catching our shiner. A hungry worm on a small hook, let down by a fine grass-line, gently into the water—there! he nibbles; don't be in a hurry: let him get a firm hold; there! He comes! Squirming with all his might, and shining like a silver dollar. Lay him down. See how he pants! Notice the rising and falling of the small lid on the side of his head. Raise this lid, and see the gills full of red blood. These are his breathing-apparatus. He can not live on air. He needs the same oxygen that is in the air, but he must get it from the water. Into his mouth the water runs, and, as it passes out under the gill-cover, the gills take the oxygen out of the water and send it to the blood.

13. That is the way in which the shiner breathes. His flesh is very poor eating, and is full of minute bones; but any fish seems good to the youth who catches it. So, now that it is dead, we will open and dress it. Under the spine we find a transparent sac, evidently filled with air. This is the swimming-bladder, and it is filled with gas or emptied at the will of the fish; and, just as it is more or less filled, the fish rises, remains stationary, or sinks in the water.

14. The fish world is more numerous in people

than that of any other animals, and the varieties are almost endless. Some of them, like our common fish, are found singly, and some, like the mackerel of the sea, move in large companies or schools. Some are caught with nets or seines, but many of them, like the cod of the ocean, and the cat-fish of the rivers, are taken with large hooks. Some are deceived by a savory bait covering the hook, and others are fools enough to swallow the mischievous barb with only a piece of bright metal attached, and trolled, or drawn through the water behind a boat.

15. The salmon family is an interesting one, including the large trout and white fishes of the



The Speckled Trout.

lakes, and the river salmon that run up high waterfalls to lay their eggs and leave their young in secluded places. But the speckled or brook trout of the small, clear brooks in the Northern States, is the most beautiful as well as the most palatable of all.

16. A practical skill alone takes the brook

trout. With all the devices of hooks and lines, of worms and artificial flies, the trout-fisher must move deftly and unseen, when he dangles his line after this wary, crimson-spotted fairy of the brook. It is exciting sport to catch and land the trout, and he who succeeds will feel like joining with our good brother of the angle when he says: "I once heard one say, 'I envy not him that eats better meat than I do, nor him that is richer, or that wears better clothes than I do: I envy nobody but him that catches more fish than I do.' And such a man is like to prove an angler; and this noble emulation I wish to you and all young anglers."

CHAPTER XXXVI.

FINNY TRIBES OF LAKE AND SEA.

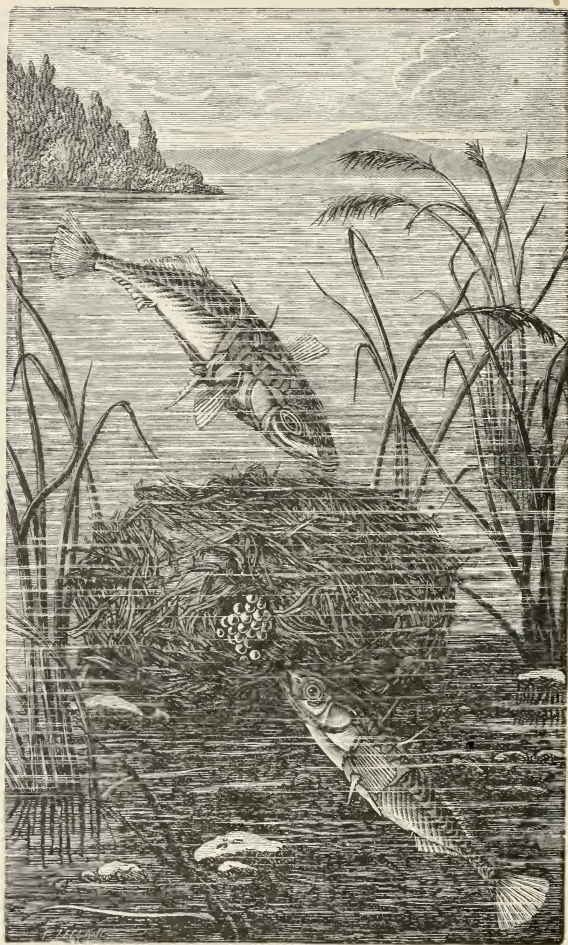
1. A LITTLE boot-black in Chicago, who had been reared in an orphan asylum, when asked who his father and mother were, replied that he had no parents: that he was born an orphan. So the millions of little fish in the great world of water might say with some real truth that they were born orphans. With few exceptions, they are hatched from eggs laid and left alone in the water. From the first moment when they are set

free from their embryo prison, they know no parents, but are left to fight the battle of life without help. This early independence gives them the pluck they need. Fish life is a real battle, and the main occupation of all fish is to eat and to keep from being eaten.

2. Fish are admirably adapted, by the way they are made, to kill and to keep from being killed. The little trout, that lives principally on flies and worms, is a nice nugget for bass to eat; but he is so active that he can get away from his cruel enemy, and can climb the tumbling streams where the bass can not go. The pike has large jaws and sharp teeth, and is a heartless cannibal of small fish; but it is said that he looks and meditates long before he concludes to take into his mouth and send down his throat the little sun-fish, with its erect spines standing on its back like angry spears.

3. In the bird world, the eagle, who can tear a lamb in pieces, can not catch the pigeon on the wing; and the spry, little kingbird can fly over the eagle and wound him in the neck. So, in the fish world, some individuals are armed with giant weapons to kill, while others are able to live and protect themselves by being small and active, and by other curious provisions.

4. Low down in the scale of life, and without

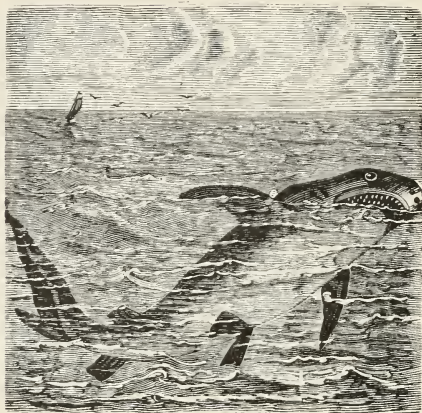


The Stickleback and its Nest.

bones or jaws, are some creatures of the water that have an odd way of getting on in life. The cuttle fish is one of the family of fish called head-footed, because they are all head and feet. They defend themselves with a bottle of ink which they carry. When attacked, they color the water about them with this fluid, so that their enemy can not see them, and under cover of this black cloud they make their escape and capture their prey. The squid is like the cuttle-fish. It has been found twice the length of a man, and with arms five times as long as a man. These arms are sprawling, strong, and supple, and can be very dangerous. The devil-fish has the same sort of arms or legs, and can travel on land as well as in water.

5. Among the higher orders of fish that have bones, there are found equally remarkable means of defense and attack. The balloon-fish is covered with spines like a porcupine, and must be an uncomfortable morsel for the mouth or throat of any other fish. The stickleback, whose name tells of its nature, is even a worse inmate of a tender mouth than the balloon-fish. A long, sharp sword forms the upper jaw of the sword-fish, with which it can pierce a shark. The saw-fish carries a flat sword, armed on either side with ferocious teeth. Savages have used the jaw of the saw-fish for an ugly weapon of war.

6. The shark is so large and powerful that he is called the tiger of the ocean. He sometimes



The White Shark.

reaches a length of thirty-five feet. The hammer-fish, whose head is shaped like a tack-hammer, is dreaded by sailors even more than the shark. The angler-fish practices the tricks of the fisherman. From the upper part of his head shoot out long bending spines like teamsters' whips. Like a boy holding his rod and line, this angler lies at his ease in the mud, dangling the end of his spine in the water just in front of his enormous mouth. When a foolish fish, or a stupid loon, darts for the supposed bait, it is apt to find itself instantly inclosed by a pair of hungry jaws.

7. The flying-fish, that lives in the warmer latitudes, is able, by a spring into the air with the

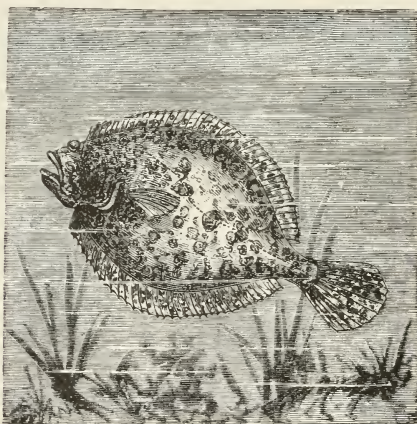


Flying-Fish, pursued by Dolphin.

spreading of its wings, to fly several hundred feet away. In this manner it escapes persecution in the water, but enters a new world of trouble when the sea-birds get after it on the wing. The climbing-perch, of India, sometimes emigrates to a new home by creeping up the bank and over a long space of dry land, using its fins for feet, and its instinct for a guide. India, too, has a little fish,

called the archer, who has no teeth. The spines on its back are a protection against its enemies, but its food is procured by shooting. Spying a beetle sitting on an overhanging branch, the archer greets him with a few drops of water fired from its mouth; the game drops to the surface of the water, when it is easily caught.

8. The flounder finds safety in being flat. Its head and both eyes are on one side, so that it can lie upon the bottom in shallow water on the other side, with its eyes turned upward. Thus danger



The European Turbot.

can come from one side only, and that is well watched. The English sole is like our flounder;

and the turbot, of the same family, is large and much esteemed for food.

9. Great prices are sometimes paid for turbots, which constitute a prominent dish at public dinners. A story is told in which the turbot is a silent character, but becomes the occasion of some slippery dealing, followed by a merited punishment: A rich nobleman was about to be married, and great preparations were made at his castle for the wedding-feast. Everything rare and costly was provided except fish. Both the chief cook and the nobleman himself were sorely put out because the sea was so rough that fishermen dared not venture out. However, the very day before the wedding a sturdy fisherman, who had heard of the lord's distress, came from a distant village, bringing an unusually fine turbot, and asked to be admitted.

10. The fat little Italian porter, sporting a fine livery and chain, and feeling important withal, was quite willing to turn a dishonest penny if he could not turn an honest one. So he refused the fisherman admittance unless he would agree to share with him half the price received from the nobleman for the fish. The fisherman said he had worked hard to catch the fish and bring it so long a distance, and that it would be ridiculous to give the porter half the price he should get for it.

“As you choose,” said the porter, sulkily, “only you will not show your fish in yonder kitchen unless you accept my proposition. Say yes, and you will get whatever you choose to ask. Otherwise, you can stay outside till your fish spoils.”

11. The fisherman, tired and angry, felt obliged to accept the unjust demand, and, having shouldered his turbot, was marched into the great kitchen, where he met the nobleman himself, who was delighted at the arrival of the longed-for game. “Don’t be afraid,” he said; “name your price, for I will pay anything within reason.” And he displayed his purse filled with shining, jingling gold. “Sir,” said the fisherman, “I am about to ask a strange price, but it is the only one I will take for the turbot.”

12. “Speak up, speak up,” cried the lord, impatient to secure his treasure; “I will pay your own price.” “Well, sir, I crave two hundred lashes on my bare back,” said the man, with determination. “Nonsense! Are you mad? Tell me your price and be gone,” said the nobleman, angrily. “This is my price, and no other will I take, so please you, great sir,” said the fisherman, as he began to repack his fish. All thought him silly, and joined to persuade him to accept a money price, but with no success, for he repeated, firmly, “Two hundred lashes, or nothing.”

13. The nobleman, concluding that the fellow must be mad, ordered his men to give him the two hundred blows, saying that he would soon cry "stop," and that the lashes could be laid on lightly. So the fisherman took off his jacket, laid bare his big, strong shoulders, and took the first hundred lashes, when he cried, "Hold ! hold ! that will do."

14. "I am glad to hear that," said the lord, clapping his hands ; "but I thought you demanded two hundred lashes?" "Aye, sir, so I did," replied the fisherman, "but I have a partner in the business, and I ask that your lordship will kindly summon him that he may now receive the other half of the pay." "Why, you don't mean that there's another man as mad as yourself?" cried the lord, deeply puzzled. "Yes, sir, and he is not far off," said the fisherman : "he is your own porter, and he insisted on my keeping outside unless I shared with him whatever you gave me."

15. "Oh, now I understand," cried the nobleman. "Fetch him instantly, and let him have his share by all means. Lay it on soundly, my men. Afterward he can go, for I want no such clever gentleman at my doors."

16. So the porter was paid, and heartily too, at the end of the lash, while the honest fisherman received a silver coin for every blow he had endured, and went on his way rejoicing.

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